The Bristol Medico-Chirurgical Journal.

"Scire est nescire, nisi id me
Scire aiius sciret."

DECEMBER, 1910.

THE MEDICAL ASPECT OF BOSWELL'S "LIFE OF JOHNSON," WITH SOME ACCOUNT OF THE MEDICAL MEN MENTIONED IN THAT BOOK.

The Presidential Address, delivered on October 12th, 1910, at the opening of the Thirty-seventh Session of the Bristol Medico-Chirurgical Society.

BY

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A YEAR ago, when you the members of this Society elected me to the honourable position of President-Elect, I said that I hoped to have an opportunity of expressing my appreciation of the honour you had done me in more adequate terms than I was then able to muster. The time has come for me to take the chair at our monthly meetings, and my first duty is to say how much I am indebted to you for your kindness in placing me there. We all indulge in ambitions of some sort during our lives, but none can be a more honourable one than to hope that some day one may be thought of sufficient importance in our own profession to be placed at the head of its Society. I am very sensible of the honour that you have done me. If I

have not in other ways reached the heights of my ambition, I have at least attained one which I venture to believe shows that I stand well with my professional brethren.

The next duty that I have to perform is of almost as pleasant a character, to read you a presidential address. From the very circumstances of the case one must plead inexperience. It falls to few of us to occupy a presidential chair twice, but to prepare an address which will be of interest to you (if difficult) is by no means an unpleasant task.

Of recent years it has become the custom, in giving presidential addresses, to depart somewhat from the severely professional subject and to select one which, though of medical interest, will also suit those of literary or antiquarian tastes, and I propose this year to address you on such medical topics as may be found in one of the greatest books in our language, Boswell's *Life of Samuel Johnson*. In doing so I must ask your indulgence if at times I appear to depart somewhat from the strict lines that I have laid down for myself, for I have found in the preparation of my paper during the last twelve months many matters of medical gossip which I thought would be of as much interest to you as they were to me.

I propose to marshal my facts under three heads. To treat first with Johnson's own life as depicted by himself or Boswell from a medical aspect ; secondly, to give a sketch of his opinions and experience of medical practice of that time ; and thirdly, to refer, only in brief outline, to a few of the numerous medical men with whom Johnson came in contact and enjoyed his friendship.

When reading the vivid account that Boswell gives of his great patron, one cannot help being struck with the great amount of bad health and physical suffering that the " great lexicographer " endured. When in his seventy-fifth year he wrote to his life-long friend Hector, a surgeon at Birmingham, that his health from his twentieth year had been such as seldom afforded him a single day's ease, one is forced to the conclusion that many of the self-accusations that he makes in his *Prayers and Meditations* of dilatoriness and laziness were due to this reason.

Dr. Samuel Johnson was one of two sons, his brother Nathaniel dying when twenty-five years old. Boswell ascribes Samuel's constitutional weakness to the fact that he was the son of a man of fifty-six by a wife of forty years of age, rather than to any hereditary reason, for his father, Michael Johnson, was a man of large and robust frame.

The poor little Samuel was in early life attacked with scrofula, and was one of the last persons in this country to be touched by royal hands for the King's Evil. This remarkable ceremonial, for which a special service existed in the Book of Common Prayer till 1719, had been in vogue since the time of Edward the Confessor, and we marvel in the present day at the persistence of what one monarch of this realm called "a silly superstition." Johnson was touched by Queen Anne, whom he faintly remembered as a "lady in diamonds and a long black hood," and was presented with the token or coin which I understand is still preserved in the British Museum This ceremony probably took place in Lent, 1712, as an advertisement is to be found in the *London Gazette* of that date to say that the Queen was ready to touch for the Evil. Johnson was then twenty months old, and was touched on the advice of Sir John Floyer, a physician of Lichfield.

What was the state of the cervical glands at the time of the touching is not recorded, but Johnson bore the scars in his neck all his life. Boswell ascribes Johnson's defective sight to the scrofula, and I think on this ground alone we may assume that Boswell was not a pathologist. It is extremely difficult to say from what defect of the eyes Johnson suffered. In one the sight was very deficient, or as he jocosely remarked, "This dog was never good for much," but one or both appear to have improved as he got older, suggesting that he had myopia, which improved as he became presbyopic, for he says in 1756 that his sight was restored to him. As an instance of how defective it was I may mention one incident. He had promised Mrs. Abingdon to be present at her benefit at Drury Lane Theatre, and he accordingly went and sat in "the front boxes with a body of wits." From this position he could neither hear nor see

anything of the play, but he with due courtesy to the great actress sat the piece out—a play of five acts and a farce of two—" wrapped in the gravest abstraction."

For the eye trouble the treatment then employed was of a more active nature than for scrofula, for an issue was cut in his neck, that is an artificial ulcer was made and kept open by the insertion of some irritating substance. To go no farther back than Mr. Augustin Prichard, it is interesting to find an issue claimed as a successful remedy. He states in his reminiscences that his father, the distinguished ethnologist, originated the plan of making a long incision in the scalp for brain diseases, commenting that though a strong remedy, it was sometimes undoubtedly the means of saving life. Even in my student days it was mentioned in the lectures on Materia Medica.

Of his infant and adolescent ailments—common to all flesh—no mention is made. We have only a description of his appearance, which both as a young man and an old one was, to use a moderate expression, peculiar. As a young man at the age of twenty-five, we have an account from the hand of Miss Lucy Porter—the daughter of Johnson's wife by a previous husband—describing him when paying his addresses to his future wife, then double his age, " He was lean and lank, so that the immense structure of his bones was hideously striking to the eye, and the scars of his scrofula were deeply visible, . . . and he often had, seemingly, convulsive starts and odd gesticulations which tended to one's surprise and ridicule." We must be glad that Mrs. Porter overlooked these physical defects in the qualities of the man, for she said, " This is the most sensible man I ever saw in my life."

Boswell, as usual, had his theories about these convulsive starts, and compares them to St. Vitus's dance, and this statement has lead an American physician to assume that Johnson really had this complaint, and traces his subsequent heart troubles to this disease. Johnson had a much simpler explanation, for when asked by the *enfant terrible* of the day why he made such gestures, he replied, " From bad habit, my dear; do you take care to avoid bad habits."

Of his appearance in later life we may draw a general idea from the numerous portraits that are in existence, though no doubt the artist would gracefully and tactfully omit to make a striking feature of anything that would offend. Unfortunately, Johnson was not particular in his personal appearance, or indeed in the niceties of polite behaviour. There is no need to recall them, they do not come within the scope of my address, but one cannot help reminding you of a witty saying of Mrs. Boswell's, who, when no doubt a little out of temper with Johnson's uncouth manners, chided her husband with his servility to the great men, " I have heard of a man leading a bear, but never of a bear leading a man." Johnson's enemies, and for the matter of that his friends, did not mind making coarse remarks about his peculiarities. " The Caliban of Literature," and " The Puffy Pensioner," are not polite, although clever and to the point.

Johnson's chief trouble during his life was a tendency to melancholia and depression of spirits. He claimed that it was hereditary, for his father suffered from it. There are frequent references all through the life of Johnson to this " constitutional melancholia," which he himself termed vile, and which he says made him " mad in life, at least not sober." It caused him when the fit was upon him to shut himself up and avoid the society of his friends. It is related how on one occasion he was found " in a deplorable state, sighing, groaning, and talking to himself, and restlessly walking from room to room." He does not appear to have been averse to talking about it with Boswell, whom he found a sympathetic listener and fellow-sufferer, though the difference between the two men is illustrated by the fact that Johnson's plaints were written in his *Prayers and Meditations*, intended for his own reflection, while Boswell makes his confessions in letters to Johnson, and publishes them unblushingly in the *Life of Johnson*.

Johnson's anxiety about these fits of depression was that he might be deprived of his reason, a not unnatural fear to a man of great mental capacity, whose livelihood, as well as the care of several distressed females and an eccentric doctor,

depended on his retention of his faculties. Yet with this constant depression of spirits and general feeling of ill-health, he had the greatest contempt for anyone who paraded his feelings, wrote about them in correspondence, or introduced the subject of his health as an excuse for omitting to write and supply some information asked of him. He could console, but on one occasion his patience was too severely tried by Boswell, and he gave him what may be called a piece of his mind in an unmistakable manner. "You are always complaining of melancholia, and I conclude from these complaints that you are fond of it. No man talks of that which he desires to conceal, and every man desires to conceal that of which he is ashamed. Do not attempt to deny it, *manifestum habemus furem*, make it an invariable and obligatory law to yourself never to mention your own diseases—if you are never to speak of them, you will think on them but little, and if you think on them but little they will molest you rarely. When you talk of them, it is plain that you either want pity or praise; for praise there is no room—and pity will do you no good. Therefore, from this hour speak no more, think no more, about them." It is significant that Boswell, though candid enough to insert this letter (a gem in its way), makes no comment upon it.

Boswell did not repeat all Johnson's complaints, for Mrs. Thrale says that he was constantly doing so to her; this was after the great quarrel between them, and Mrs. Thrale may have said it in spite.

I am not aware that we at the present time claim melancholia as a peculiarity of this island, but Dr. Cheyne, whom Boswell describes as "learned, philosophic and pious," wrote a book on this condition, and called it *The English Malady*. Johnson recommended Boswell to study the book, as he would find some useful advice in it.

With all his bad health, Johnson had the greatest contempt for what he calls valetudinarianism, a word that I cannot help thinking has changed its meaning since Johnson's day. According to the dictionaries of the present day it is defined as a state of ill-health, but this will not accord with Johnson's own

example, which would be better explained by the modern word neurasthenia. To his friend Hector he says, "Don't grow like Congreve, nor let me grow like him when you are near me," for this same Congreve, an old school-fellow of Johnson's, had grown afraid "to go into any house but his own," and was encouraged to drink by an elderly female he called his cousin, "in which he is very willing to be encouraged," making him always "muddy." And in another place he says, "There is nothing against which an old man should be so much on his guard as putting himself out to nurse. I do not know a more disagreeable character than a valetudinarian, who thinks he may do anything that is for his ease, and indulges himself in the grossest freedom. Sir, he brings himself to the state of a hog in a stye."

Boswell tells us that when he left Johnson in May, 1783, it was with a "fearful apprehension of what might happen before his return, as his health was in a more precarious state than at any time when I had parted with him." I do not think that Boswell made any claim to the reputed powers of second sight that the inhabitants north of the Tweed are often credited to possess, but his fearful apprehensions were fulfilled in a remarkable way. Eighteen days later Johnson had a stroke, and it is of so interesting a character that I will give you rather a full account of the course of the disease. From Johnson's own account we learn that he went to bed as usual after a not very fatiguing day, having only sat for his portrait, which was being painted by Miss Reynolds. After a short sleep he awoke and sat up, when he felt a confusion and indistinctness in his head, which lasted, he supposed, about half a minute. "I was alarmed, and prayed God that however He might afflict my body He would spare my understanding. That prayer, that I might try the integrity of my faculties, I made in Latin verse. The lines were not good, but I knew them not to be very good, but I made them easily, and concluded myself to be unimpaired in faculties." How many of us could compose a prayer in Latin verse under such circumstances—or any other?

"Soon after I perceived that I had suffered a paralytic

stroke, and that my speech was taken from me. I had no pain and so little dejection in this dreadful state that I wondered at my own apathy, and considered that perhaps death itself, when it should come, would excite less horror than now seemed to attend it. In order to rouse the vocal organs I took two drams of wine. Wine has been celebrated for the production of eloquence. I put myself in violent motion and I think repeated it [probably the wine], but all was in vain. I went to bed and, strange as it may seem, I think slept." On awakening he found that his power of writing was not lost, so wrote instructions to his servant Francis and a friend, though he found some difficulty. " My hand, I know not how or why, made wrong letters." How rapid was his recovery will be seen when I tell you that the account I have just read to you was written by him only two days after the stroke, and further he says that he was able to repeat the Lord's Prayer, " with no very imperfect articulation."

The clearness of this account and the presence of mind under the circumstances are remarkable, no less remarkable too are Johnson's methods of treatment. Two drams of wine to produce eloquence when the speech centre is affected amuses us in the twentieth century, but it will illustrate better than any words of mine the state of darkness in which medical science was in the Georgian Era. In another letter written on the day of his stroke he suggests that by a " speedy application of stimulants much might be done. I question if a vomit, vigorous and rough, would not rouse the organs of speech to action." As a help to the Doctor whom he called in—Dr. Heberden—he says he has been bled frequently for an asthmatic complaint, but had forborne for some time by Dr. Pepys's persuasion, who had perceived that his legs had begun to swell. We are not told any more details of the illness. Boswell was not in London at the time ; had he been we should probably have had much more information.

Johnson made a complete recovery in a very few days, for on July 3rd—that is only seventeen days from the date of his stroke —he writes that " Nature had renewed its operations," and that

he could carry on a conversation, though only for a short time, as his nerves were weak. His physicians pronounced him cured, but I fancy he must have taken matters a good deal in his own hand, for he had been for a drive to Hampstead, no small thing in a Georgian carriage, and had even dined at the club.

He now kept well for a considerable time except for attacks of gout, till he was threatened with a surgical operation. The complaint from which he suffered was a sarcocele, a solid swelling as distinguished from a hydrocele, a fluid one.

The surgeons who were called in to pronounce upon the nature of the disease were Percival Pott and Cruikshank, the latter of whom he had previously recommended as a lecturer to the Royal Academy in place of William Hunter. We are not told much, though Boswell says that he has several letters filled with "unpleasing technical details." Whatever was the nature of the disease matters little, for Johnson was spared the ordeal of an operation by the trouble getting well spontaneously. He showed great fortitude in preparing himself for what must have been in those days a grave risk to life, apart from the pain of an operation in the pre-anæsthetic time.

Though Johnson's health was far from satisfactory, he continued to make visits to his friends, and even projected a trip to Italy, but his letters show that he suffered a great deal from his "asthmatic affection and from gout." In May he suddenly obtained extraordinary relief. He had shut himself up and employed the day in the particular exercise of religion—fasting, humiliation and prayer—and his deeply religious belief made him ascribe the sudden amelioration of his symptoms as a divine answer to his prayers.

As Boswell, who had been in London on one of his visits, was returning to Edinburgh, Johnson asked him to lay the details of his case before the best physicians of that city, who at that time, as now, stood high in repute in the medical world. What he hoped to gain from them and their opinion is difficult to say, for they could only form a diagnosis or suggest treatment on the evidence of a non-medical man. But true to his promise,

Boswell duly laid Johnson's case before Drs. Cullen, Hope, Munroe, Gillespie, and Sir Alexander Dick. What their opinions were is not recorded, but Johnson was profoundly obliged to them, possibly because they wrote such flattering encomiums on his greatness. Like most of us—like the least of us—Johnson was susceptible to flattery, even if a little fulsome. Of remedies suggested only one is preserved for us, that of Sir Alexander Dick, who appears to have recommended some rhubarb, cultivated in his own garden in Prestonfields; this Boswell was to bring when he returned to London.

In the year 1783, when Boswell was in London, in March, it was evident that Johnson was, to use a common expression, breaking up, though his ardour for literature was not abated, and he worked as hard as ever in his more or less dilatory manner. Boswell notes his pallor, shortness of breath and bad nights, and mentions as an instance of how difficult a patient he was that Sir Lucas Pepys, the Thrales' doctor, said, "If you were tractable, sir, I should prescribe for you." Johnson was then taking opium for producing sleep. I believe that this was then the only hypnotic drug known, as chloral and bromides had not been discovered. No doubt Johnson felt his own intractableness, for he said, "How few of one's friends' houses would a man choose to be at when he is sick." And Boswell says that he only mentioned one, the Thrales'.

The poor old man's last days appear to have been very heavy ones for him, for a second attack of gout came upon him "with a violence I never experienced before." The opinion of Dr. Mudge may have relieved his mind somewhat, for he represented the attack of gout as antagonistic to the palsy.

Added to all the troubles of bad health, he had the misfortune to lose, one after another, the members of his strange household. Levet's death, followed by that of Mrs. Williams, left him very solitary. He says, "Sickness and solitude press me very heavily. I could bear sickness better if I were relieved from solitude." You all recollect Johnson's definition of a certain man—he was clubbable, and to no one could that adjective be better applied than to Johnson himself. He loved the society

of his fellow-man, and though through his last illness his friends were constant in their visits to him, he felt the loneliness of his own home and the absence of his house companions.

At the end of the year 1783 he was seized with a spasmodic asthma of such violence that he was confined to the house in great distress, sometimes being obliged to sit up all night. Dropsy began to develop, and reached up to his thighs, but was relieved later by a natural evacuation. In April he writes that his "recovery is such that neither myself nor the physicians at all expect," but for all that he was able to get out to the club, and even later in the year to pay a visit to his beloved Oxford, "the magnificent and venerable seat of learning, orthodoxy and Toryism," as Boswell called my native city, an appreciation that might be passed even now except, perhaps, as regards orthodoxy.

We medical men sometimes, and perhaps with justice, complain that our efforts on behalf of our patients meet with scant recognition, or only with thanks of an ephemeral character. I am glad to say that, trying patient as he must have been, Johnson expressed his gratitude in no measured terms for the assiduous attention of his medical attendants. "If the virtue of medicine could be enforced by the benevolence of the prescriber, how soon should I be well," he wrote to his medical man, Dr. Brocklesby.

And so matters went on, asthma, dropsy, and sleeplessness followed him wherever he went, and on his return to London in November it was evident that he could not live long. So greatly had the dropsy increased that incisions had to be made, incisions that Johnson did not think deep enough, and so deepened for himself, thereby rendering himself open to the charge of attempting to hasten his own end. All was of no avail, and having asked his friend Brocklesby to give him a direct answer whether he could recover, and being told he could not without a miracle, he said, "Then I will take no more physic, not even opiates, for I have prayed that I may render up my soul to God unclouded." A few days later he died, passing away so peacefully that his attendants hardly noticed

when dissolution took place. Had he lived in these days no doubt he would have had the administrations of a skilled attendant to ease his last hours. He, poor man, had to put up with one that he said was " an idiot, he is as awkward as a turnspit when first put into a wheel, and as sleepy as a dormouse." I am glad to say the sleepy one was dismissed, and a more wakeful one found, to whom Johnson gave his grateful thanks.

It is by no means an easy matter at the present time to form an opinion as to what was the complaint from which Johnson suffered, and which ultimately caused his death. We read of his asthma, the swelling of his legs and breathlessness, but we must not judge too hastily of the terms that were used in those days. They did not recognise the differences between renal, cardiac or bronchial asthma; and the word gout was used in a very loose manner, much the same as many of our own patients make use of it now; and the swelling of his legs may have been due to heart or renal troubles. We must remember too that Boswell was not a medical man, but an advocate, and though he was a well-read man, probably knew little of medicine; indeed, the remarks that he often makes show that he was not more skilled in it or more versed in the diagnosis of disease than the common herd. We must also recall the fact that diagnosis by auscultation was unknown till many years after Johnson's death, and the few drugs that we read of Johnson taking give us no clue as to the diagnosis of the physicians who were attending him.

On this subject two medical men of the United States have given their views. Dr. Cahill believes that Johnson had mitral regurgitation following several rheumatic attacks, more particularly after the one in 1763. I have read through the record of this year with a view of reconciling this suggestion, but am quite unable to accept his theory. This was the year that Boswell made Johnson's acquaintance, and began to collect the notes with the intention of writing the biography, and I cannot believe that he would at the very beginning of his friendship with his great patron have made no reference to an attack of rheumatic fever. I can find no reference that can in any way

be made to read that Johnson had such a disease. Dr. Cahill says that Johnson early developed chorea (though he qualifies it by saying that it was habit chorea, a disease that I never have heard produced cardiac disease), and then on this very slender foundation says that the whole of the subsequent medical history may be followed: "The succession of chorea, rheumatism, cardiac dropsy form a clear picture with which all physicians are unhappily too familiar."

The second writer says that he had angina. I cannot agree with this either. It is true that he was attended by the doctor who first described that disease, Dr. Heberden, but I think there is not sufficient evidence for this assumption, although angina was called asthma Heberdenii.

My opinion is that Johnson suffered from asthma as he grew older, and that led to dilatation of the heart with dropsy, and that he died from heart failure. It is quite possible too that there was a good deal of fatty infiltration of the heart muscle, as we know Johnson became very fat in his later years. [1]

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I now come to the second part of my paper, and hope that you will bear with me while I give a short account of some of Johnson's opinions on medical matters, and say a few words about the position of medical men and medical treatment as shown in the *Life of Johnson*.

Johnson, as you probably know, was a man who had little sympathy with the fads, and I regret to say sometimes with the opinions of others, and when he disagreed he spoke his mind in terms that could not be mistaken. He for instance was not a believer in the influence of the weather on the health, and he was wont in his rather forcible manner to ride rough-shod over those who expressed opinions differing from his own. "He had," says Boswell, "a contempt for the notion that the weather affects the

[1] Since reading the above my attention has been called by my friend Dr. H. Rolleston to an account of an autopsy on the body of Johnson. I hope to add a condensed statement of what was found to the end of this address. Meanwhile I will only say that my opinion here stated must be modified.

human frame," though in the last year of his life, when writing to Dr. Burney in August, he says, " The weather you know has not been balmy. I am now reduced to think, and am at last content to talk of the weather. Pride must have a fall." The condition of the weather was to him such a self-evident fact that he said, " You are telling us that of which none but men in a mine or a dungeon can be ignorant. Let us bear with patience and enjoy in quiet such elementary changes, whether for the better or worse, as they are never secrets." On one occasion he and Boswell were leaving the " Mitre," where they had been dining, and found it to be raining, and the latter made some commonplace remark on the relaxing effect of rain on the nerves and the depression of spirits that it caused, but admitted it was good for vegetables. " Why yes, sir, it is good for vegetables, and good for the animals who eat those vegetables, and good for the animals who eat those animals."

I presume that I may regard the taking of or abstention from alcoholic fluids as a medical question, for it is one that was fought almost as strongly in Johnson's day as now. It was a drinking age, I might say almost a drunken one. Johnson tells us that even in his day persons were drinking less than their ancestors did, for he remembered when all the decent people of Lichfield got drunk every night, and were none the worse thought of. The drink then (in the days of his ancestors) was chiefly beer, which was cheap, for when wine became commoner the drinkers were not in such " haste," which according to Johnson was the cause of this change in manners. As a young man Johnson took his wine, and could do his bottle, his favourite one being port sweetened with sugar, and he celebrated his acquaintance with Boswell by performing this feat, though he tells us that if he took too much he went home quietly. As a middle-aged man Johnson became an abstainer. He did so from no dislike of wine or because he thought it was wrong to take it, but simply because he was advised to do so by one of his doctors, but by whom or when the advice was given is not recorded.

Johnson once told Boswell that he when on a visit to University College, Oxford, drank three bottles of port at a

sitting, and was none the worse for it. The giving up of wine to him was a diminution of pleasure but not of happiness, as there was more pleasure in being rational than drunk. Boswell was none too sparing in his potations, and the doctor was very firm in his advice to him: "I must entreat you to be scrupulous in the use of strong liquors. One night's drunkenness may defeat the labours of forty days well employed." Boswell reminded him how they used to have headaches after the wine they took, but Johnson replied, "No, sir, it was not the wine that made your head ache, but the sense I put into it." Boswell, "What, will sense make a head ache?" Johnson, "Yes, sir, when it is not used to it."

As an instance of what men could drink in those days I may instance the case of a Dr. Campbell, I believe a divine, who stated that he drank thirteen bottles of port at one sitting. Boswell vouched for Campbell's statement, qualifying it with the remark that the stiting was a long one. When discussing this vinous feat Johnson upheld Campbell as a veracious man with pen and ink, "but you could not entirely depend on anything that he told you in conversation, or if there is a fact mixed with it. However, I love Campbell, he was a solid orthodox man, he had a reverence for religion, and though defective in practice, he was religious in principle." Please mark the fine distinction.

The wine consumed in those days was chiefly port, which cost only 5s. 6d. a gallon. Of claret, though not a newly imported wine, Johnson had a very poor opinion, saying a man must be drowned in it before it made him drunk, so that it seems as if the potency of the wine was the measure of its quality rather than the flavour of its bouquet. Everyone knows the famous Johnsonian saying after being induced to taste a glass of claret, "Claret for boys, port for men, but he who aspires to be a hero must drink brandy." I may mention that Johnson would not let Boswell drink the king's health in whisky, but we must bear in mind his aversion to everything Scotch. Florence wine—I presume much the same as the Chianti of the present day—he thought poor stuff. "It is wine only to the eye; it is wine neither while you are drinking it,

nor after you have drunk it, it neither pleases the taste nor exhilarates the spirits."

Johnson, who had learned a good deal of medicine from the assistance that he had given Dr. James in compiling his *Dictionary of Drugs*, had his own ideas on medical subjects. This assumption of knowledge on matters not connected with our own particular branch of human learning is a common failing, but perhaps it is not more universal or more firmly established than when connected with our own profession. It constitutes one of the chief difficulties with which all practitioners of medicine have to cope, and much as the art of medicine may advance, the omniscience of the public will keep pace with and even out-run the knowledge of those who make it their life's study. Numerous examples might be given of Johnson's opinion on medical matters, but I will only repeat one, as it bears out the well-known fact of the contagiousness of the common cold in the head. When planning with Boswell the tour to the Hebrides he praised the "magnanimity" of Macaulay in asserting the wonderful story of how, when a ship called at St. Kilda, all the inhabitants were seized with a cold, because it was a well-attested fact. Johnson's theory was that a north-east wind was essential before a stranger could land, owing to the difficulties of the exposed harbour. "The wind," he said, "not the stranger occasions the epidemic cold." I may say that St. Kilda is not one of the Faroe Islands as an American lately stated, but is one of the outlying islands of the Hebrides, and part of the United Kingdom. Johnson's theory of the evil effects of a particular wind is interesting, and probably the reverse of the truth.

On one occasion when a pretty large circle of friends had met Johnson gave his views on medicated baths, a system, if I may call it so, that had been made popular by a certain Dominicetti. Johnson believed them to be of no more value than warm water, having no more effect than tepid moisture. Johnson was not in one of his polite moods that evening, and on one of the members combating this opinion, he said, "Well, sir, go to Dominicetti, and get yourself fumigated, but be sure that

the steam be directed to thy head, for that is the peccant part." Cibber said of Johnson, "When his pistol misses fire, he knocks you down with the butt-end of it." A not unfit comment.

One is surprised to find that Johnson had his views on the management of hospitals. "Though many men are nominally entrusted with the administration of hospitals and public institutions, almost all the good is done by one man, by whom the rest are driven on, owing to confidence in him and indolence in them." I am afraid that the converse is also true.

When getting on in life he no doubt felt that there was a fear that people might say of him that his intellectual powers were failing. "There is a wicked inclination in most people to suppose an old man decays in his intellect. If a young or middle-aged man, when leaving a company, does not recollect where he laid his hat, it is nothing; but if some inattention is discovered in an old man, people will shrug up their shoulders and say his memory is going." This is, I fear, an apology for old age.

The belief that disease is the scourge of the Almighty to try our faith no doubt had its origin from the Old Testament and from the Book of Job, in which you will remember the conference between the Almighty and the Evil One on the power of the latter to make the unfortunate victim of disease and misfortune curse God and die. Johnson, a Tory with the orthodox opinions of the time, held views somewhat of this sort: "Acute diseases are the immediate and inevitable strokes of heaven, but of them the pain is short and the conclusion speedy. Chronical disorders, by which we are suspended in tedious tortures between life and death, are commonly the effect of our own misconduct and intemperance. To die is the fate of man, but to die with lingering anguish is generally his own folly."

Johnson was not unmindful of the need of care for the preservation of health. Cleanliness was not much in vogue in those days, and no one can accuse Johnson of the too lavish use of water externally; but the following schedule is of interest, as showing that he had got hold of some sensible rules for health. They were given to Mr. Perkins, Thrale's manager:—

"(1) Turn all care out of you head as soon as you mount your chaise.
(2) Do not think about frugality, your health is worth more than it can cost.
(3) Do not continue any day's journey to fatigue.
(4) Take now and then a day's rest.
(5) Get a smart sea-sickness if you can.
(6) Cast away all anxiety, and keep your mind at ease."

This last direction is the principal; with an unquiet mind neither "exercise nor diet nor physic can be of much use."

It will, I think, not be devoid of interest it we for a few minutes take the measure of the medical profession in the days when Johnson lived and George III was king, and it must be confessed that, though individual medical men were held in high repute, made large incomes, and had honours conferred upon them as now, the state of medical knowledge was in those days deplorably low. None of the great discoveries had been made that at the present time assist us in diagnosing our patient's ailments. The reason for this is not far to seek. Physical science was unknown, undiscovered. It was not till the commencement of the nineteenth century that the foundations of chemistry were laid, or the correct interpretation of the laws of physical science were understood. Anatomy, it is true, had reached a high degree of perfection, but beyond the discovery by Harvey one hundred years before, the physiology of the body was unknown, the functions of the organs misinterpreted, and the causes of disease an unknown quantity. Therapeutics had hardly emerged from the darkness of the days of hideous and disgusting medicaments, and the few reliable drugs were difficult and expensive to obtain. Added to this, the education of a medical man was of the most meagre description. There was no Medical Act to regulate or control the profession, no supervision of examinations of licensing bodies, while the exclusiveness of the Royal College of Physicians had a most harmful effect on the practice of medicine.

Any reference to this period of history would be incomplete

without some few words on the theories of medicine that obtained both in this country and on the continent. The remarks must be very short, for it is impossible to go deeply into them owing to their complexity and obscureness. At the beginning of the century the theories of Boerhaave were almost universally accepted and known as the Eclectic System, though they were founded mostly on still older ones, even on Galen's. Health, disease, and debility depended on "tense, relaxed or weak fibre." He adopted the word "putridity" from the pneumatics and the Hippocratic "enormon" as the cause of "motion," an unknown something, which occasions the senses and "motions." Hoffman introduced the Mechanico-Dynamic System, and was followed by Cullen. In his system the nerves played the most important part, nerve force and activity being the terms, and used without any definition. Fever was due to diminished energy of the brain, and was a reparatory effort of Nature. Gout was due to atony of the stomach, and scrofula to acidity, and putrid fever to the humours. In fact, the extraordinary jumble of words without meaning reads very like Christian Science of the present day.

The School of Montpellier was inaugurated by de Bordeau, the originator of the saying, "The tripod of life." In this system the heart, brain and stomach regulated all the other organs, disease being due to acidity of the glands. This was followed by Reil's doctrine of vital force, each organ having its own liability to changes due to season, age, and even the time of day; and to call forth this vital force certain imponderables were required, such as heat, light, electricity. From this Mesmer developed his theory of animal magnetism, and the later romancers the phlogistic and antiphlogistic theories. Lastly, Brown started the theory known as the Brunonian, in which all vital phenomena were due to irritation. Brown's therapeutics are said to have killed more men than the French and the Napoleonic wars put together.

If we are at the present time troubled with quacks, herbalists, bone-setters, prescribing chemists and irregular practitioners of medicine, the condition of affairs in the Georgian days was

far worse. Besides numbers of charlatans of all descriptions, three sets of persons carried on practice, uncontrolled, in opposition to the legitimate practitioners of medicine. Firstly, the apothecary. He was little removed from the quack. He was, it is true, in possession of some sort of licence to practise, but his standard of ethics was low and the knowledge of his craft small. At times he was a great asset to the medical man, for he would call him in consultation on treatment. In this way he would be in a position of giving patronage, and so was a person not to be slighted, but rather to be made much of. The herbalists were quite irregular practitioners, they had no qualifications of any sort, and a perusal of their pharmacopœia shows how colossal was their ignorance and immense their impudence. The quack, " a person making a pretence of medical knowledge," was a flourishing person. He was not ashamed to stoop to any artifice that would bring grist to his mill, and entice the public only one degree more ignorant than he, to entrust their bodily ailments to him. The modern quack, and the disbarred practitioner of to-day, is a poor descendant of the Georgian one, they have neither the impudence that can cloak ignorance nor the powers of self-laudation that carry conviction.

We must not form our conceptions of the position of medical men on the success of any well-known man of those days, on the fortunes of Radcliffe or Mead. The bulk of the profession in those days was far worse off from a monetary point of view than we are at the present ; and if the social status of medical men to-day is superior to what it was one hundred and fifty years ago, it is due to our superior education and greater skill, and to our having been able to convince the public by the application of our knowledge that our opinion is worth having and worthy of being acted upon.

To become a successful doctor in Johnson's day a definite course had to be followed. The aspirant to medical distinction had to decide to which political party he would ally himself, and to assiduously toady to the leaders and wire-pullers. Politics ran even higher in those days than they do in the present, and anyone wishing to advance in medicine had better not adopt the

Whig programme. Johnson himself was a Tory of the deepest hue, and could see no good, nor would hear it, of his political opponents. Having decided on the party you wish to be attached to, you must frequent the coffee-house favoured by that side you have selected, be seen there daily, and "learn and practise every obsequious and crawling art which dishonours a man, and so by slow degrees to attract and secure patrons." I do not think that I am over-stating the picture, degrading as it is to our profession, for the last sentence is quoted from an author who knew London and its people as few other have, and his illustration may be relied on as truthful.

Of the practice of surgery in the Georgian Era I need say little. The revolution in that branch of our art is so recent that it will suffice to say that surgery, as practised then, was little in advance of what obtained in the days of the Roman Empire. Medicine was not in a much better position. The antiquated pharmacopœia was being thrust aside by more modern and rational drugs, and if some of the methods employed appear to us to be crude, if not barbarous, it may be said that they were the attempts, heroic at times, to discover how disease might be treated in a more rational manner. One of the first steps taken was the introduction of the practice of inoculation for small-pox, then one of the commonest and most fatal of diseases. Issues, setons, cupping and bleeding were all in full use: only the last two remain with us in an emaciated condition. Johnson, though a great dabbler in physic, was not an advocate of periodic bleeding as was then so much in fashion. His opinion was that by frequent bleedings you accustom yourself to an evacuation that Nature cannot perform for herself, and therefore cannot help you, should you, from forgetfulness or any other cause, omit it: so you may suddenly suffocate. For other periodic evacuations Nature can supply the omission. Dr. Taylor, with whom this conversation was held, said that he did not like to take an emetic for fear of breaking some small vessels. "Oh," said Johnson, blowing with high derision, "if you have so many things to break you had better break your neck and there 's an end on't. You will break no small vessels."

An insight into the drugs that were used in those days is given me by a copy of the Pharmacopœia of St. Thomas's Hospital for 1772. This little book was used by my great-great-grandfather, one of George III's physicians, and in it are numerous pages of notes on diseases, and the remedies employed, in his handwriting. I cannot go at length into the measures he took to cure his patients, but the list of drugs shows how few are still in use, or perhaps I should say how greatly we have increased our list.

The number of drugs mentioned in Boswell's *Life* is very small: opium, squills, Peruvian bark, and tartar emetic constitute the total. Johnson took all of these, and in his last illness "Dr. James's compound medicines," whose ingredients appeared to him "to be inefficatious and trifling, and sometimes heterogeneous and destructive to each other." Dr. James, whom I shall mention presently, has still one powder known by his name, "Pulvis Antimonialis," which is so simple as hardly to come under Johnson's condemnation. It was the day of huge mixtures, of which the celebrated Mithradate, having opium as its most important ingredient, was the best known, it having seventy-three different drugs to compose its formula. The compound medicines of James that Johnson took exception to contained a very large number and totalled three hundred and thirty grains, of which four were of tartar emetic. It also contained thebaic tincture, a preparation of opium. Johnson said of it, "He that writes thus surely writes for show. . . . We will, if you please, leave this medicine alone. The squills have every suffrage, and in the squills we will rest for the present." Rhubarb was then a rare drug and highly prized, so that Sir Alexander Dick's present to Johnson was a very marked attention. It came originally from China by the caravan route to Russia once a year. The Russian Government had a monopoly till 1762, when the trade was thrown open, but the Russian Rhubarb Office was only abolished in 1863. In my father's work on the *History of Prices* I find that half an ounce cost 5s. in 1741, a very high price.

(*To be continued.*)

REMARKS ON THE SURGICAL ASPECT OF GLYCOSURIA, AND ON DIABETIC GANGRENE, WITH THE RECORD OF THREE CASES IN WHICH AMPUTATION WAS PERFORMED FOR GANGRENE IN DIABETICS UNDER SPINAL ANÆSTHESIA.

BY

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THE first question to be considered is what constitutes diabetes? If we say diabetes may be defined as persistent glycosuria, we must remember that the sugar may disappear from the urine for a time in a case in which it has been present for a lengthy period, and in which there have been symptoms commonly present in diabetes. We can hardly regard as diabetes a glycosuria which so far as we know is only temporary, and not accompanied by excessive thirst or polyuria; but on the other hand, we cannot say, because sugar appears in the urine for the first time whilst the patient is under our observation, that it is only temporary diabetes, for the glycosuria may really have only been temporarily absent. In such a case if we have marked thirst, polyuria and wasting, it should certainly make us suspicious that true diabetes was present.

It has long been recognised that temporary glycosuria may follow injury of the central nervous system, but it is believed[1] that glycosuria may also be due to an injury in a limb, such as a fracture, or to a septic disease, such as suppurative appendicitis or pyosalpinx; and Mr. Llewellyn Phillips has recorded a case of spreading traumatic gangrene in which glycosuria appeared during the course of the disease and disappeared after recovery. Moreover, there are at least records of two cases, collected by Mr. Phillips, in which the presence of large abdominal tumours

[1] Phillips, *Lancet*, 1902, i, 1308, and Kausch, *Brit. M. J.*, 1904, ii, 1534.

was associated with glycosuria, and the latter was cured by their removal. If, therefore, we find sugar in the urine of a patient suffering from a fractured leg, or some septic disease, it does not follow that he has diabetes (and in some cases polyuria and marked thirst have been present in this so-called " traumatic glycosuria "). If there is evidence that sugar was not present in the urine before the injury or onset of the disease, or in its early stage, and if it is no longer present when recovery takes place, and does not recur after an interval, without diabetic diet, then we may apparently conclude it was " traumatic glycosuria." But until we had evidence of its permanent disappearance after recovery we could not tell, for, as I have pointed out, its onset during the time the patient is under our observation does not prove it is not true diabetes, for it may have been only temporarily absent. It is very important to recognise that it may apparently be caused by the presence of large abdominal tumours, for the presence of glycosuria in such cases might otherwise be regarded as a contra-indication to operation.

I do not propose in this paper to discuss the desirability of performing various operations in diabetics ; patients often stand such operations very well. Mr. Mayo Robson has quite lately advocated operations which are likely to cure chronic disease of the pancreas in diabetes, for the diabetes may be due to the pancreatic disease. A very exhaustive paper on the surgical aspects of glycosuria and diabetes was published by Mr. Llewellyn Phillips some years ago, [1] and he has shown that though there is an undue liability to sepsis, and many cases die comatose after operation, yet a considerable number have recovered after major operations, and therefore operations for removal of malignant growths, and for acute conditions dangerous to life, should be performed. In my three cases the patients were not adversely affected by the amputations (which were all through the knee-joint), and the most scrupulous precautions as to antiseptic details, and the use of spinal instead of general anæsthesia, enabled me to avoid both the complications of sepsis and coma.

It will be noted in reading the records of my three cases that in

1 Phillips, *loc. cit.* See also paper by Noble, *Amer. Med.*, 1903, vi, 511.

one the sugar had much decreased by diabetic diet, and in another had disappeared with special diet; but in the third the man had so much pain, and the gangrenous parts were so fetid, I did not like to delay operation for the patient to be dieted. It is probable he had been dieted before admission, but I have no note as to this. It is certainly wise, if we can give the time to it, to diet the patient before operation.

Not only have we to consider the definition of diabetes, but also the question as to what constitutes diabetic gangrene. Every medical man is familiar with the term "diabetic gangrene," and in every text-book of surgery diabetes is given as a cause of gangrene; but the exact causation of the gangrene is not very fully considered. What is the connection between the glycosuria and the gangrene? Some surgeons consider[1] that it is due to endarteritis and sclerosis of the arteries, or to nerve degeneration, so that the innervation of the tissues suffers. Does the mere presence of some abnormal chemical constituent in the tissues lead to such failure in their nutrition that they die, and if so why do certain parts only perish? The tissues, we know, are less able to resist the growth of pyogenic organisms than in a healthy person. Does such a substance act as an exciting cause of proliferative endarteritis, and by leading to the narrowing of the vessel wall produce gangrene in the same way that atheroma does? In connection with the view that gangrene in some cases of diabetes is the result of failure in innervation of the tissues, Case No. 3 is of interest. There was a perforating ulcer, such as we see now and then in tabes, associated with a spreading, moist gangrene; but it does not seem likely to me that defective innervation alone would account for both conditions. In some cases the gangrene may be of the "senile" type occurring in a diabetic, *i.e.* there may be blocking of the arteries from atheroma. It would perhaps be best to call such a case senile gangrene occurring in a diabetic. It is said[2] that even if the gangrene be due to some condition in no way dependent on the glycosuria,

[1] Phillips, *loc. cit.*, also article on "Gangrene," in Cheyne and Burghard's *Manual of Surgical Treatment*, vol. i, 1899, p. 63.

[2] Cheyne and Burghard, *op. cit.*

such as ordinary atheromatous obstruction of the lumen of the artery, yet if it occurs in a diabetic, it spreads with greater rapidity, is associated with marked manifestation of inflammation, and is generally of the moist rather than of the dry variety, which is the common form in ordinary "senile" gangrene. In one of my own cases, though glycosuria was persistent, the gangrene was of the dry form, and due to atheroma blocking the vessels It was, in fact, a case of so-called "senile" gangrene occurring in a diabetic.

The prognosis of gangrene in diabetes in bad. Mr. Llewellyn Phillips,[1] writing in 1902, found that during the years 1884–99 there were eleven cases in St. Bartholomew's Hospital not treated by amputation, and they all died; and six out of eight cases treated by amputation died. It would be instructive to know the exact cause of death in all these cases—those operated on and those not operated on—but this Mr. Phillips has not told us. But he has told us that sloughing of the flaps occurred in four of the six cases fatal after amputation. The great probability is that death occurred in most of the cases either from septicæmia or coma. In diabetes the tissues are in a particularly favourable condition for the growth of pyogenic organisms, and the patient is always liable to coma. This coma may come on, of course, after an amputation, and the amputation may therefore be regarded as a determining cause, but I do not know that there are any statistics that would prove that an operation is really a determining factor. It has been thought that the administration of an anæsthetic might produce it, and seeing the close relation between the pathology of diabetic coma and late chloroform poisoning, such a supposition seems quite reasonable. The coma may be a continuation of the anæsthetic coma, or there may be an interval of days. It seems to me that in any operation on a diabetic it would be advisable to avoid a general anæsthetic if possible, certainly chloroform,[2] because most cases of late anæsthetic poisoning have been after chloroform, and also ether, for there have been a few cases of late anæsthetic poisoning after ether. The

[1] *Loc. cit.*

[2] This is the opinion also of Professor Kausch of Breslau, *loc. cit.*

examples which I now record seem to me to show how suitable spinal anæsthesia is for these cases.

Of course, in every operation the most scrupulous care must be taken with regard to antiseptic precaution; operating on these cases is very much like operating on a knee-joint, for the result of carelessness might be most disastrous. In diabetes the tissues seem to have no power to resist the invasion of pyogenic organisms, and even if so few gained entrance into the wound that they would probably be destroyed by healthy tissues, they would most likely, in the tissues of a diabetic patient, lead to suppuration, which might ultimately be fatal, through a general infection.

In all these three cases the form of amputation was the same—Stephen Smith's amputation at the knee joint, by means of lateral flaps. This has always seemed to me a very satisfactory method, as the skin which before covered the knee forms a very suitable covering for the femoral condyles, on which it ought to be possible to bear weight.

In diabetic gangrene, as in "senile," it is generally considered that amputation should be at or above the level of the knee-joint. If diabetic gangrene is from the same cause as is the so-called "senile" gangrene, *i.e.* from blocking of the artery (but in diabetes due to a form of proliferative endarteritis other than ordinary atheroma), clearly we must amputate considerably above the area of the gangrene so as to get above the blocked vessel, and it seems to me that unless we have evidence of pulsation in the tibials at the ankle, we must conclude that the arteries are blocked in the leg, though pulsation in them is not always obtained at the ankle in an apparently healthy limb. If we have a pulsating posterior tibial at the inner ankle, or a pulsating dorsalis pedis, then, even in diabetic gangrene, we might amputate quite near to the gangrenous area.

We ought to consider carefully in what cases of diabetic gangrene amputation is called for. If the area is small, and the gangrene is not spreading, I see no reason why amputation should be done, unless the process of separation of the dead tissue is so tedious that the patient desires to have an operation which

may hasten matters. If so, a thorough removal of sloughs may suffice; but if the gangrene is spreading, or is associated with great pain in the living margin of tissue, or there is pyrexia due to septic absorption from the gangrenous area, then the question of amputation must be seriously considered. If the most scrupulous care is taken as to antiseptic details, and spinal anæsthesia used, I do not think the risk of amputation would be great.

Case 1.—*A case of dry gangrene due to atheroma of the arteries associated with diabetes.*—E. S. C., aged 66, was admitted to the General Hospital in October, 1907, with dry gangrene of the great toe. The necrotic area in part separated, and was in part removed, but the gangrene spread to the next toes, and the neighbouring part of the foot. No pulsation could be felt in either the posterior tibial or the dorsalis pedis artery in either foot, and the radials were thickened. The popliteal arteries could be felt pulsating on both sides (he was very thin). He had glycosuria on admission, and it persisted during the six months he was in the hospital, but considerably decreased on diabetic diet.

On April 24th, 1908, amputation was performed through the knee-joint under spinal anæsthesia, which acted well. The popliteal artery was very rigid and thick, and the arteries of the amputated leg were found to be extensively affected by atheroma. The lumen of the posterior tibial was almost completely blocked, and that of the anterior was very small. Primary union occurred except at one minute point and the patient was in no way the worse for the operation.

Case 2. *Moist gangrene with very thick arteries, probably atheromatous.*—F. M. was sent to me on May 14th, 1907, by Dr. Mackenzie at the General Hospital. Gangrene had been present for three months, and there had been much pain. There was an abundant deposit of sugar in the urine. The arteries could not be felt in either foot, and they were much thickened in the arm. The popliteals could hardly be felt. There was stinking moist gangrene of all the toes, of an inch of the foot close to them, and a large patch of gangrene extended down the sole almost to the heel. On the 15th amputation was performed through the knee-joint under spinal anæsthesia. His general condition was none the worse for the operation, and the wound did not suppurate, but a small portion of one of the flaps sloughed. He was able to leave the hospital in the summer, but Dr. Mackenzie reported his death, I think, in September, from diabetic coma.

Case 3. *Spreading moist gangrene, associated with perforating ulcers.*—S. H., aged 57, was admitted into the General Hospital

in June, 1908, with a recent patch of gangrene in the sole of the foot, involving the skin and deep fascia, and pus was burrowing more deeply. There was a perforating ulcer on the same foot of six months' duration. The sloughs were cut away soon after admission, but fresh gangrene appeared, and in August the whole foot became greatly swollen, and dusky in patches, with areas of suppuration near the ankle. There was then moderate pyrexia, and his pulse was getting rapid. In June there was sugar in his urine, but this disappeared with diabetic diet. There was no indication of arterial thickening.

On August 13th I amputated through the knee-joint, under spinal anæsthesia. He was none the worse for the operation, and there was primary union of the wound. When seen in October there was a very small dry superficial slough on the skin of the stump.

HYOSCINE AND THE MYDRIATIC ALKALOIDS.

BY

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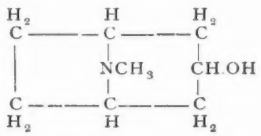
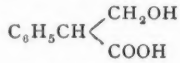
THE physiological phenomenon of mydriasis may be produced by the action of a number of alkaloidal bodies, and is known to bear a certain relationship to their chemical structure. A dilatation of the pupil may theoretically be produced by a paralysis of the circular muscle fibres of the iris, or of the endings of the oculomotor nerve, or by the stimulation of the radial muscle fibres, or of the sympathetic nerve endings. The mydriatic alkaloids (of which atropine is the best known) act in the first-mentioned manner—that is, they paralyse the sphincter fibres and the oculomotor nerve endings. Whether atropine also stimulates the sympathetic nerve endings is uncertain; it seems probable that it does not. Cocaine, on the other hand, owes its mydriatic effect mainly to its stimulation of the dilator fibres, and moreover it is without effect on the ciliary muscle and the light reflex. For this reason it is not usually classed among the

mydriatics, which are most of them derivatives of a base known as tropine.

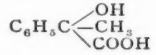
Tropine being a basic substance, is capable of combining with acids to form what are known as esters—the series of bodies so produced being called tropeines. Tropine has a somewhat complicated chemical structure ; it is formed of a double ring of carbons, and contains in the group common to both a single atom of nitrogen :—



It also contains one hydroxyl (OH) group, and it is to this that the acids are attached, with the loss of the elements of water, when a tropeine is formed. Tropine itself has some action on the pupil, for it causes mydriasis in cats when given in toxic doses, but the tropeines show considerable diversity, some being actively mydriatic, and others being inert. Ladenberg, by an elaborate series of investigations, was able to show that in a large number of instances the mydriatic power of the tropeines depended on the chemical configuration of the acid "side chain," to which the basic tropine was united. Only those tropeines are mydriatic in which this acid contains a benzene ring, and an alcoholic hydroxyl (OH) group. Though Marshall, Jowett, and others have shown[1] that this law is not quite universally true, yet it obtains in a large number of cases. Thus the combination with tropic acid (atropine)



and that with mandelic acid (homatropine)



are well-known mydriatics, whereas the lactic acid compound

$$CH_3CH,OH,COOH$$

[1] *Tr. Chem. Soc., Lond.*, 1900, 1906–7.

the cinnamic acid compound

$$C_6H_5CH : CH,COOH$$

are inactive, because in neither are both the required conditions present. A salicylic acid tropeine

$$C_6H_4OH,COOH$$

is also inactive, because the OH group is of the nature found in phenol, and not that of the ordinary aliphatic alcohol. This curious relationship has been found to apply to certain artificially produced bodies in which the base is not the same as tropeine. An example of this class is the substance known as euphthalmine.

Atropine, or tropyl-tropeine, is a crystalline body, only slightly soluble in water. It is optically inactive, its solutions failing to rotate the ray of polarised light either to the right or left. It will be observed that tropic acid

$$C_6H_4-\underset{\displaystyle COOH}{\overset{\displaystyle H}{\underset{|}{\overset{|}{C}}}}-CH_2OH$$

contains an asymetrical carbon atom, that is one of which all the four affinities are satisfied by different groups. It is therefore capable of existing in two stereo-isomeric forms, a right-handed and a left-handed variety. It is possible that it transmits this characteristic to its derivative, atropine—at any rate, dextro and lævo-rotary varieties of this substance are known, as well as the ordinary racemic or inactive body. Cushny[1] has shown that the alkaloid naturally occurring in belladonna is lævo-rotary, and is identical with the body known as hyoscyamine; in solution this changes into the racemic form, atropine. The dextro-rotary form does not occur naturally in the free state. The dextro and lævo-hyoscyamines have a somewhat different physiological action; with regard to the action on the central nervous system *d* hyoscyamine acts most powerfully, and *l* hyoscyamine least so, whereas the action of the latter variety on the iris and peripheral nerve endings is twice as strong as that of atropine, *d* hyoscyamine having hardly any action at all on these structures. Atropine, therefore, which

[1] *J. Physiol*, 1904, xxx, 176.

contains equal moieties of both will act half as strongly on the peripheral nerve ending as l-hyoscyamine, though its central action is equal, owing to the presence of the dextro-rotary portion.

Pseudo-hyoscyamine, isolated from duboisia, is a crystalline alkaloid with a melting-point of 132–134°C. Large doses are said not to increase the pulse rate, and may decrease it. It is generally less toxic than atropine.[1] Cushny states that its mydriatic action is slight. Belladonnine and atropamine differ from atropine chemically and physiologically to a slight extent. Little is known about them.

The bodies known as daturine, duboisine, and mandragorine are mixtures of variable composition, and need not be further considered; there remains, however, the interesting substance hyoscine, which is now somewhat largely used in medicine as a sedative and hypnotic.

The structural formula of hyoscine is not precisely known. Its empirical formula differs from that of atropine in containing one atom more of oxygen and two atoms less of hydrogen, being thus its oxidation product.[2]

Bender in 1892, and E. Schmidt and O. Hesse in 1893, came to the conclusion that hyoscine was identical with scopolamine, an alkaloid obtained from the root of scopola carniolica, a plant indigenous in parts of Austria, and official in the United States Pharmacopæia as a substitute for belladonna. In 1894 Hesse suggested that scopolamine was composed of two isomeric bases, one of which he called hyoscine and the other atroscine. The latter is optically inactive, the former, which is the natural base, is lævo-rotary.[3] Hyoscine in alcoholic solution containing a trace of alkali is according to Hesse quickly converted into the racemic form. Boiling with baryta water is said to split up scopolamine into tropic acid and a base scopoline (which has also been called oscine) $C_8H_{13}NO$, the melting-point of which is said to be 110° C (E. Schmidt). This base, it will be observed, contains two atoms of hydrogen less than tropine.

[1] Buonarotti, *Arch. Ital. de Biol.*, xxiii. 1 and 2, 211, 1895.
[2] J. Schmidt, *Pflanzen alkaloide*, 1900, p. 38.
[3] Naylor, *Pharm. J.*, 1905, ii. 126.

The analogy of these bodies, the optically active and inactive hyoscines, to the optically active and inactive hyoscyamines is very striking. Lævo-rotary hyoscine has a powerful peripheral action, dextro-rotary hyoscine is almost inert. Both act similarly on the central nervous system.[1] The natural alkaloid is very similar to atropine in its peripheral action, but acts more powerfully and rapidly, though the effect passes off sooner.[2] In its cerebral action it differs from atropine. The stage of excitement is short or absent altogether, and soon a condition of marked depression and drowsiness supervenes. The excitability of the motor areas of the cortex to electricity is diminished, instead of being increased, as is the case with atropine in small doses. The temperature, which is raised by large doses of atropine, is unaffected by hyoscine. Occasionally symptoms of excitement have been observed, but these have been by some attributed to the presence of an impurity—apoatropine. According to Kessel,[3] this body is easily detected by adding a drop of potassium permanganate solution to the solution to be tested, which produces a brownish-yellow colour, if as little as one part in 20,000 of apoatropine is present. Scopolamine and atropine produce no such colouration.

The natural alkaloid is a thick syrupy liquid, and therefore unsuitable for therapeutic purposes. The salt most commonly employed is known as hyoscine or scopolamine hydrobromide, $C_{17}H_{21}NO_4HBr.3H_2O$, and is a mixture of the hydrobromides of the lævo-rotary and inactive isomers. It consists of colourless odourless crystals, with a bitter taste, soluble in two parts of water, thirteen parts of alcohol, and slightly soluble in chloroform and ether.[4] As a mydriatic a solution of 1 in 250 may be used; hypodermically the dose is 0.32 to 0.65 mgm. ($\frac{1}{200}$ to $\frac{1}{100}$ grain), which may be increased to 1.2 mgm. ($\frac{1}{50}$ grain). It may also be given by the mouth, the bitter taste being covered by chloroform water. The hydrochloride is said to be less easy to prepare in a state of purity.[5]

[1] Cushny and Peebles, *J. Physiol.*, 1906, xxxii. 501.
[2] W. E. Dixon, *Pharmacology*, 1906, p. 81.
[3] *Arch. Internat. de Pharm. et de Thérap.*, 1906, xvi. 1.
[4] *B. P. Codex*, 1907.
[5] Rüplmaar, *Wein. Med. Wchnschr.*, 1894, lxiv. 20.

The action of hyoscine varies in intensity in different individuals. Meijer[1] recommends that slightly smaller doses should be given to women than to men, and that increases in dosage should be gradual and cautious; a failing heart and marked arterial degeneration are contra-indications for its use. Cushny points out that its comparative safety as a drug lies in the fact that it is easily and rapidly excreted or destroyed in the tissues.[2]

The following cases of poisoning by hyoscine or scopolamine have been recorded:—

(1) Worrall[3] in 1889 recorded a case in which $\frac{1}{100}$ grain (0.65 mgm.) caused faintness, a weak, rapid almost imperceptible pulse, widely-dilated pupils, and a cold, clammy skin. Recovery took place after ten hours, during which four injections of pilocarpine gr. $\frac{1}{10}$ were given.

(2) Gray[4] in 1892 observed two cases which illustrate the great variation in the effect of hyoscine on different individuals. In the first case, one of melancholia with marked motor unrest, gr. $\frac{1}{33}$ (2 mgm.) was necessary on most nights in order to obtain sleep. In the second, a healthy young woman suffering from tonsillitis was ordered gr. $\frac{1}{43}$ (1.5 mgm.) as a hypnotic. It immediately produced numbness of the body and limbs, dryness of the throat, dimness of vision, and rambling talk. In an hour she took a second dose, apparently of the same size, and became actively delirious for three hours, with a small, rapid pulse (92), fixed, dilated pupils, sighing respiration, and much general depression of function. The face was not flushed, and there was no laughter or noisy exhilaration. The case was treated by the injection of gr. $\frac{1}{4}$ morphine, and was almost well next day, though vision was not normal for three days.

(3) Pooley[5] in 1895 noted two cases in adult women, and one in a girl of 13, in which six instillations of a 0.2% solution of hyoscine hydrobromide into the conjunctival sac produced a

[1] Schmidt's *Jahrbüch*, 1900, 269, 222.
[2] *Pharmacology*, 1906, p. 290.
[3] Dixon Mann, *Forensic Med. and Toxicology*, 1908, p. 623.
[4] *Brit. M. J.*, 1892, i. 705.
[5] *Canadian Lancet*, Jan., 1895.

staggering gait, dry throat, rapid, irregular pulse (120), a sensation of "pins and needles" in the soles of the feet, and spasmodic contractions of certain facial muscles.

(4) Sharp[1] in the same year experimented on himself, and found that gr. $\frac{1}{100}$ (0.65 mgm.) instilled into the eye, or gr. $\frac{1}{35}$ (2 mgm.) *per os* produced first quickening and then slowing of the pulse, which was full and bounding in character, throbbing of the temples, dryness of the mouth, blurring of vision with dilated pupils, and staggering gait. His face became flushed, and there was mental confusion and somnolence. The symptoms passed off in twelve hours.

(5) Given[2] in 1904 recorded a case occurring in a man aged 69, who suffered from senile tremor and cramps, and who had previously taken the drug with benefit. Owing to a dispenser's error, the solution was made up with grams instead of grains, so that the patient received 4.8 mgm. or $\frac{3}{40}$ gr. (nearly $\frac{1}{10}$) in a single dose at bedtime. His throat became dry, and his speech thick almost immediately, and in half an hour he was deeply comatose, with stertorous breathing and dilated pupils. The face was flushed, the conjunctival reflex practically absent, and the pulse regular (80). The stomach was washed out, and hot coffee run in through the tube, and strychnine, morphine and caffeine were injected subcutaneously. He recovered in about seven hours.

(6) Morton's[3] case in 1896 was one in which gr. $\frac{1}{25}$ (2.6 mgm.) was instilled into the eye. In five minutes there was giddiness, dry mouth, staggering gait, and mental confusion. The patient gradually became unconscious, and there was complete muscular relaxation, flushed face, slow breathing, and full regular pulse. This condition lasted for four hours, and was succeeded by a cheerful delirium, in which the patient, though at times irritable, laughed a good deal and made jokes. After two hours she fell asleep. Recovery was complete with amnesia.

(7) Nicholson[4] in the present year has described the case of a

[1] *Brit. M. J.*, 1895, ii. 1547. [2] *Lancet*, 1904, i, 24.
[3] *Brit. M. J.*, 1896, i. 336.
[4] *Lancet*, 1910, ii. 884.

boy, aged five years, who swallowed four or five tablets, each containing $\frac{1}{100}$ gr. hyoscine hydrobromide. He was shortly afterwards seized with convulsions. His temperature rose to 100°; the pulse was 124 and bounding; the skin was hot, dry, and flushed; the pupils were fixed and dilated, and the patient quite unconscious. Pilocarpine hydrobromide, gr. $\frac{1}{4}$, injected produced marked and rapid improvement, and by the next day the child was quite well.

For the last eight years a number of cases in Germany and elsewhere have been treated by what was known as Schneiderlin's method of narcosis. This method, which consists of injecting small doses of morphine and hyoscine (scopolamine), has been specially practised in obstetric cases. The doses usually given are 3 mgm. (gr. $\frac{1}{200}$) scopolamine hydrobromide and 10 mgm. (gr. $\frac{1}{6}$) morphine hydrochloride. The injections may be repeated at a few hours' interval three or four times, but in these subsequent injections the morphine is usually omitted. This induces a condition known as "twilight sleep," in which there is considerable drowsiness and insensitiveness to pain, and subsequent forgetfulness of the events occurring while the patient was under the influence of the drug. Roith collected 4,000 cases from the literature with eighteen deaths, fourteen of which he considered due to the anæsthetic (mortality 0.35 per cent.). In other cases there were cyanosis, rapid, irregular pulse, vomiting, motor unrest, delirium, and heightened reflex excitability. Minor disturbances were extreme thirst, dryness of the mouth, and suppression of sweating and salivary secretion. Moreover, it has been shown that the drug easily affects the infant through the placental circulation, and some 20 per cent. of the children are born with more or less severe respiratory depression. The method appears to have no advantage over ordinary chloroform anæsthesia.

ON THE EXCISION OF STRICTURES OF THE URETHRA.

BY

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IT is somewhat remarkable that in these days, when much ingenuity and daring are expended upon new operative procedures, so little attention has been paid to the radical atretment of urethral strictures.

It is true that most modern text-books do mention the excision of strictures in a brief and unconvincing sort of way, after they have devoted many pages and illustrations to the detailed description of the various forms of urethrotomy. Isolated papers appear from time to time dealing with this subject; but nevertheless the radical operation for urethral stricture is not as widely known, or practised, as it well deserves to be. It is not taught as a routine method of operative surgery. It is owing partly, I suppose, to the zeal of instrument makers, partly to the fascination that especially elaborate instruments have for some people, and partly to the important part that these instruments are made to play in students' examinations, that urethrotomy holds its place as the principal operation for severe urethral strictures.

In this respect the urethrotome has played the same part in hindering the proper radical treatment of urethral stricture as has the guillotine in that of tonsillar enlargement.

I would therefore venture to bring forward the results I have obtained in a small series of cases of this operation, in order that I may have the opportunity of describing the details of the method, and pointing out the great advantages that it presents over dilatation and urethrotomy.

During the last seven years I have had six cases of this operation, and although I am aware that this is not a sufficient

number on which to base any very far-reaching conclusions, yet as the results obtained have been so uniformly good I think that they may be fairly taken in conjunction with the many cases published in recent surgical literature as illustrating the advantages of the method. I have had no fatality, no untoward complication, and as far as I have been able to ascertain, permanent success in all. A short history of three of my cases will suffice to exemplify the method and its results.

Case 1.—F. B., a railway porter, aged 63, had been suffering for about seven or eight years from difficulty in micturition. He alleged that this was the result of a strain, but there was no confirmation of this, and the stricture was probably inflammatory. Only the smallest instruments could be passed (No. 4), and these caused pain and bleeding. *Operation*, April 19th, 1908. Excision of a stricture about one inch long, situated just in front of the triangular ligament. He left the hospital within a fortnight, and he neglected to attend as an out-patient, and he afterwards explained that this was because he had no further difficulty in micturition. Two years after the operation he began to find it necessary to strain in passing water. For this reason he came to see me in September, 1910. At first only a small bougie could be passed, but after this had been done, there was not the slightest difficulty in passing others up to No. 12 (Eng. size). So that within two and a half years of the operation he has only required the use of instruments once.

Case 2.—J. P., a labourer, aged 27. Nine months previously he had sustained a severe accident, by which he ruptured the urethra. A supra-pubic cystotomy was done at the time by Dr. Toye of Bideford, who was unable to introduce any instrument into the bladder by the urethra. By this means extravasation was prevented, but nevertheless some leaking and suppuration occurred in the perineum, and when this was opened, urine escaped from the wound on the inner side of the right thigh. It required three months for the supra-pubic and perineal wounds to heal. For the next six months he suffered from dribbling and incontinence, but no instrument could be passed into the bladder. Dr. Toye sent him to me, and I found that I could only pass a small sound into the urethra, where it became so tightly gripped by the dense stricture in the region of the triangular ligament that it could not be passed into the bladder. It seemed as hopeless a case as one could have, and accordingly I gave the patient a very guarded prognosis. At first the operation was one of extreme difficulty, owing to the fact that nothing could be passed through the stricture. The whole region of the triangular ligament and membranous

urethra was occupied by a dense mass of scar tissue, but at length, after cutting through this in the mid line, the urethra proximal to the stricture was opened, and was found to be both dilated and hypertrophied. This circumstance made the rest of the operation quite easy, for although the stricture was so impenetrable that no channel could be found through it, yet was only about half an inch long, and the large and thick urethra was well adapted for suturing. He made a speedy recovery, and I have recently heard from Dr. Toye that two months after the operation a full-sized instrument could be easily passed, and that he can deliver himself of a full and ready stream of urine.

Case 3.—W. T., a workman, aged 48. Admitted into the Cossham Hospital, October, 1910. He had had an attack of gonorrhœa three years ago, and for nearly two years he has had difficulty in micturition. No instrument could be passed, the arrest occurring about five inches from the meatus. The operation was easier than either of those just described, because the stricture was well in front of the triangular ligament. It was less than one inch long, and the impossibility of passing any instrument was due to the existence of a false passage. Before he left the hospital a full-sized rubber catheter could be readily passed into the bladder.

These three cases are fairly representative of impassable strictures of the urethra. The first was the usual inflammatory contraction just at the bulb, the second was traumatic, following a complete rupture, whilst the third was a penile stricture.

As I have said in my introductory remarks, the technic of the operation of excision of urethral strictures is not described at all in current text-books. It will be worth while, therefore, to discuss the operative details in their bearing upon the feasibility and success of this treatment.

No special preparation is necessary other than that which is usual for ordinary perineal operations. The first debatable point concerns the question of the necessity for a supra-pubic opening of the bladder. Thomson Walker[1] strongly advises it, urging that the urethral wound will heal much more readily if the urine is diverted from its course. Although I have never adopted this plan, I am very favourably inclined towards it, and I shall always use it in future in cases with cystitis, and also in every case in which an instrument cannot be passed

[1] Thomson Walker in *Burghard's System of Operative Surgery*, vol. iii.

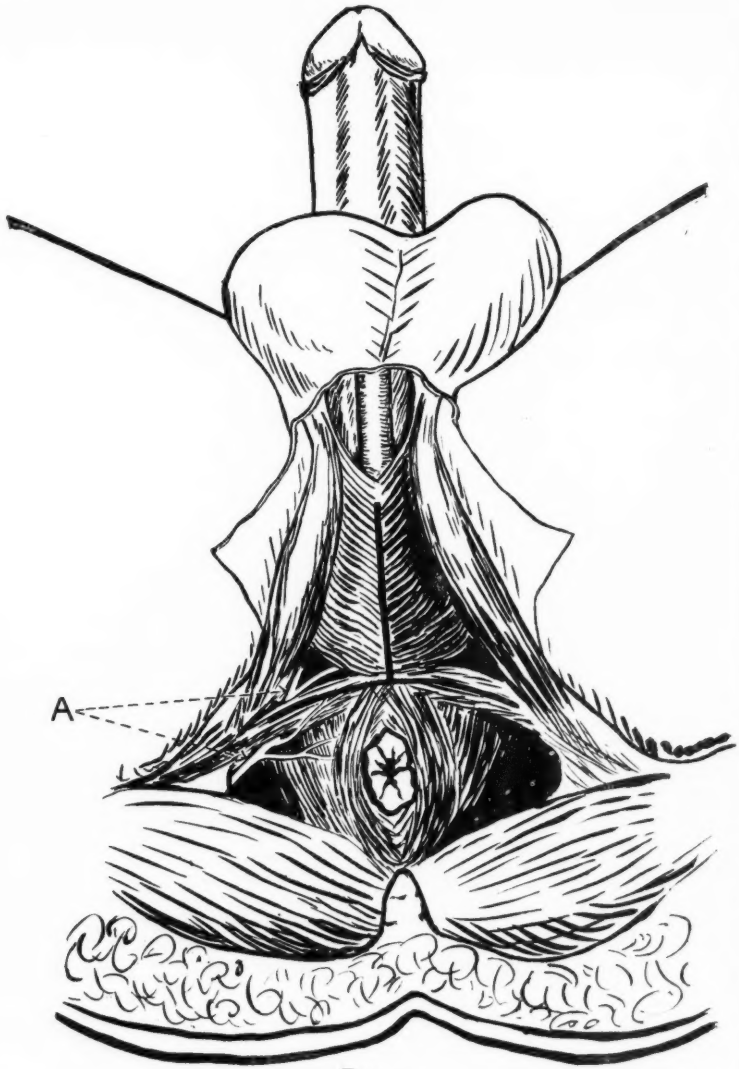

FIG. 1.

A. *Internal Pudic Artery.*

through the stricture. In this way the very great difficulty of finding the proximal end of the urethra without the guide of a sound can be readily overcome by passing a full-sized instrument through the internal meatus by way of the upper opening in the bladder.

The patient is placed in the lithotomy position, and a metal bougie held in the urethra and kept accurately in the middle line of the body. A median incision is made in the perineum which stops short one inch in front of the anus. A curved transverse cut is then made almost from one ischial tuberosity to the other, coming forward to meet the posterior end of the first incision. This ⊥ shaped opening allows three flaps of skin and fascia to be turned back. In the area thus exposed are seen the ejaculator urinæ muscle in front and the transversus perinei behind (Fig. 1), the former covering the corpus spongiosum and the latter marking the posterior limits of the dense, triangular ligament. The ejaculator muscle is divided in the mid line and its two halves turned outwards. In recommending this as a separate step of the operation I have the following reasons: the muscle can subsequently be united as a distinct layer over the seat of anastomosis, and the urethra will be more accurately exposed if the layers covering it are divided one by one, just as the trachea is, in the operation of tracheotomy.

Now comes the cardinal point in the operation, the scientific reason for which was first pointed out by Goldmann.[1] *The excision, suturing, and anastomosis must involve the whole thickness of the spongy body*, and not consist in an attempt to deal with the urethra inside the tissues of the corpus spongiosum. The advantages of this are obvious, because whilst it is impossible to mobilise the urethra inside the spongy body to more than a very slight extent, the corpus spongiosum itself can be mobilised to almost any extent. In Fig. 2 is represented in a somewhat diagrammatic manner the root of the penis after the muscles have been dissected off it. It illustrates clearly how the spongy body lies in a kind of trough formed by the corpora

[1] Goldmann, *Lancet*, 1906, i, 20.

cavernosa, thus making it possible to isolate as much of the former as may be necessary. The objection to thus dealing with the whole thickness of the spongy body and not merely with the urethra has been a fallacious one, founded on an imperfect knowledge of the anatomy of the vascular supply of these parts. In Fig. 1 is shown the main arteries to the penis. Piercing the base of the triangular ligament, the internal pudic artery divides into two main branches, one to the bulb and spongy body the other to the cavernous body and dorsum of

FIG. 2.

the penis. But Prof. Goldmann has demonstrated that the last-named vessels not only supply the skin of the penis, but their largest branches end in the tissues of the glans, which after all is merely the expanded end of the spongy body. Fig. 3 demonstrates this fact in an ingenious manner. It was obtained by injecting a bismuth mixture into the dorsal artery of the penis, and taking a skiagram of the organ. It will be observed that the whole substance of the bulb and spongy body have been filled by the injection. By this mechanism it is provided that the spongy body is richly supplied with blood by vessels which enter it at both ends, so that it may be freely divided, and a section of any length removed without endangering its nutrition. In fact, the only limit to the length of spongy body and urethra which can be removed is the disproportion produced between the lengths of the spongy and cavernous bodies. If this is too great, a downward bend will be given to the penis when in a state of erection. Goldmann noted this occurrence after excising a stricture 3¼ in. long, and I have experienced it

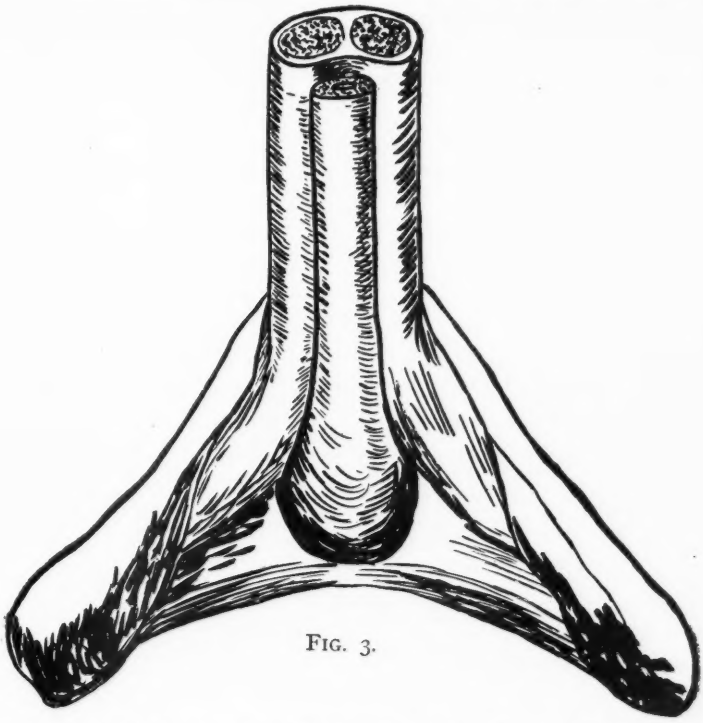

FIG. 3.

in a case of about 1½ in. But as all the tissues of the penis are eminently elastic, this matter very soon rights itself.

The great majority of strictures lie close against the triangular ligament, this being determined by the facts that the urethra becomes torn at the most fixed point, and that the most intractable ulceration occurs in the part which is most dependent, where the infective material stagnates. Cock first pointed out, in describing his classical operation for retention of urine, that one can always rely upon finding the urethra deep to the triangular ligament dilated and thickened. This part is defined, and after the stricture has been excised it is united to the corpus spongiosum in front, the latter having been freely raised from its bed. The union is effected over a rubber catheter by two

tiers of fine interrupted catgut sutures, the inner grasping the wall of the urethra and the outer the fibrous sheath of the spongy body. The muscular and cutaneous layers are separately sewn up, and a short drain is left at the junction of the two limbs of the latter. The catheter is securely tied in its place and connected with a receptacle at the side of the bed.

Both drainage tube and catheter are removed at the end of three days, but the catheter is re-inserted and changed on alternate days until the tenth day.

Having now illustrated the simplicity and success of this method, I should like to discuss what alternatives there are in the treatment of urethral strictures. They are three in number, viz. dilatation, external and internal urethrotomy, and I will consider their merits in this order.

Dilatation.—This is the method by which the majority of cases are treated, and no doubt if its scope is properly and reasonably restricted it is quite satisfactory. Every case of stricture is treated by dilatation in the first place, and this method therefore affords the information necessary for deciding on the best means of curing the case. Cases in which periodical dilatation is sufficient :—

Lister's sounds can be passed easily, without pain or bleeding.

Passage of these instruments at intervals of a few months is sufficient to prevent contraction.

The patient being satisfied with this method.

This is, I think, eminently a question which the patient himself ought to decide, whether he shall resign himself to dilatation for the rest of his life, or be radically relieved of his stricture. I would never persuade a patient who is satisfied with dilatation to submit to operation, but I think it is our duty to inform him that his condition could be cured. The position is analagous to that of a patient who is wearing a truss for a hernia. But it is a very different matter in the case of a man who has a stricture which can only be entered by the exercise of patient ingenuity, in whom the stricture rapidly contracts to a small size, rendering him liable to retention at any minute, and in one who, from his

social status or calling, is unable or unwilling to attend regularly for dilatation. In such conditions we have no right to endanger the patient's life and health by pursuing a policy of *laissez-faire*, when a safe and ready means lies to our hand of curing him. Here the position is strictly comparable to that of a man with an enlarged prostate and retention. We might argue in this case that the patient could perfectly well pass a catheter for himself, a proceeding much easier generally than in the case of a stricture. And yet surgeons have eagerly adopted the operation of prostatectomy chiefly because it is something new and showy, and because its author says wonderful things in its favour. Now the mortality of prostatectomy as revealed by hospital statistics is over forty per cent., and that admitted by its most ardent advocates is eight to ten per cent., whilst there is at present no recorded death from urethral excision! I should like to ask whether any surgeon can point to a series of six consecutive cases of prostatectomy being the first which he has ever done without a death, and with uniformly satisfactory results?

Internal Urethrotomy.—I can dismiss the other operative procedures in much fewer words. They are merely relics of an age when every operation was done in fear and trembling, and the ideal was to do the very least that would afford temporary relief. Internal urethrotomy can only be practised for strictures which admit a No. 4 sized bougie. It only makes a nick in the scar tissue of the stricture, which permits dilatation to be then pursued in its wearisome and inconclusive methods. It is utterly useless in cartilaginous strictures and in any case which is not followed up by regular dilatation.

External Urethrotomy.—If this operation is reserved as one of emergency, in cases of acute retention of urine, then there is something to be said in its favour. But if we consider the matter without the bias of the text-book teaching of twenty years ago, even as an emergency expedient, it ought to be abandoned in favour of supra-pubic cystotomy, which can be done in a few moments under a local anæsthetic, and followed up later on, if the patient's condition permits, by a radical

operation. But for external urethrotomy as an operation intended to cure a stricture nothing favourable can be said. What would be thought of a surgeon who was content to leave a patient with a colostomy, when by an extra-peritoneal operation he could remove the intestinal obstruction ? Like the other form of urethrotomy, it is useless unless followed up by regular dilatation. In twelve cases reported by Thomson Walker nine required the operation to be repeated, some of them more than once. For the performance of external urethrotomy the most difficult part of the operation of excision has to be carried out, and yet it stops short of the removal of the fons et origo mali, even at the moment when this lies under the very hand of the surgeon.

I believe that it is only because the anatomical possibility and the clinical success of the excision of urethral strictures is not yet realised that it has not yet been adopted as the routine treatment of all cases not suitable for dilatation

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AN OLD-TIME SYPHILIDIATER.

BY

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AMONG the many and varied diseases which practitioners of the therapeutical art have had placed before them by outraged nature, it is doubtful if any condition in pathology has occupied a more prominent position than the one which has received the name of the " Venereal Disease." Its history passes back to the most dim obscurity, and is finally lost in the mists of time ;

and, while many lands would gladly claim to have been the birthplace of the author of the Homeric epic, there is a striking disinclination on the part of any country to arrogate to itself the distinction of having been the primal focus from whence this condition has spread to the uttermost confines of the earth. It is probable that the question of its origin will never be solved, for the complications which hinder a successful solution are numerous. As is well known, many theories have been advanced, each of which has in its turn been considered satisfactory by a certain proportion of the human race, in which latter category it has seldom been possible to include the most favoured nation to whom the charter of rights and precedence has been willingly granted by their neighbours. It may be true that Columbus and his sailors when they discovered America also discovered, unwittingly we may be sure, venereal disease. On the other hand, it is possible that what one of his expedition claimed as a novelty may simply have been an encroachment upon the property of one of his comrades. And so with Captain Cook and his company and with many others, even to the Crusaders and earlier than their days; for enactments were enforced in regard to "stews" and the "brenning" at a very early date.

Such discussions as these are, however interesting, not the subject of the present essay, which is rather concerning the therapeutics of venereal disease, as exemplified in an account by a writer of the period, in the early part of the eighteenth century; a time when, if accounts and diagnosis may be believed, such disorders were not only extremely prevalent, but were also a common topic of conversation, formed the subject of mild reproaches, and were on occasions matter of highly-specialised objurgation. Smollett, who seldom erred on the side of obscurity in such matters, and who was besides a medical man, will furnish a criterion.

The dogmatist, in whatsoever profession or trade he may be found, is useful in some degree, though when he is, for instance, the discoverer of a cancer "cure" his utility is not always on the surface. Mr. John Profily, M.D., who wrote

early in the eighteenth century his work on venereal disease, suffered under no delusion as to his capabilities for dealing therapeutically with the protean disease, which was even more protean then than it is now, if we may judge from his comprehensive symptomatology. He calls his book *An Easy and Exact Method of Curing the Venereal Disease.* It is interesting to note the dogmatism of his " curing " when it is noted that he blends in one indistinguishable whole syphilis, gonorrhœa, and soft sore. John Hunter had not yet discriminated for him between the chancre, which so tragically bears that great investigator's name, and the soft variety ; therefore Dr. Profily was enabled to effect cures of the venereal disease which were so numerous that he might have been even prouder had they all been actual rehabilitations of bodies undoubtedly infected with the syphilitic virus. He continues his title, *With an Account of its Nature, Causes, and Symptoms: Demonstrated by way of Dialogue between Physician and Patient; for the Use and Instruction of all unfortunate Persons who may labour under that Disorder: by which in common* (it would be interesting to know more explicity his interpretation of this term) *Cases they may be instructed to cure themselves, or to know if they are treated according to Art by those whom they apply to.* Not content with so ambitious a scheme, he adds, *A Method of curing the Scurvy, Gleets, Whites, etc.*, and further subjoins, *Experiments publickly made on several Patients of an effectual and safe Method of curing the said Disease, without Salivation or Confinement.* Note in passing the necessity which leads him to make mention of the fact of cure without salivation, an interpolation which gives much information as to what was the usual procedure in his day. After a dedication addressed, " Clarissimis Dominis Praesidi et Sociis Collegii Medicorum Londinensis," he proceeds to disclaim in his preface any intention of writing " With a private View of Lucre and Profit," and addresses some scathing remarks to the " Presumptuous Pretenders," or quacks of his day, " who arrogate to themselves the sole power of curing this Disorder." Nevertheless, in spite of this fine altruistic spirit, which leads him here and in other places to deny his desire of lucrative

return for his labours, we find him vaunting the powers of his "Greek-water and Pills" in the cure of venereal troubles; and a page preceding the first dialogue is given up to an advertisement which gives the information to all whom it may concern that "Greek-water or Antiphrodisiac Pills may be had only at Mr. John Cartwright's."

We then come to the dialogues proper. The thirst for accurate scientific information in patients, which leads them to expect a detailed explanation of the rise, progress and terminations of their diseases, which is considered by many as the outcome of more extended knowledge in the present day, and which is promoted by the more or less accurate monographs appearing in the encyclopædias, is of no such recent growth, if Dr. Profily's patients may be taken as an index of the characteristics of the time. They ask for details, etiological, pathological, anatomical, therapeutical, and they are given full measure, heaped up and brimming over. He gives them his ideas of the causation of their trouble, he details the symptoms, he dilates on their anatomical structure, not merely of their "privities," but introduces a minute description of the composition of the eye and ear, and illustrates them with imposing folding copper-plates. Perhaps the most astounding fact is that after a long, learned (not to say verbose), disquisition, the patient will affirm with a certainty which does great credit to his imagination that he has understood fully what gives pause to the modern reader. If, however, in this regard the patient of those days differs in intelligence from at least the average patient of the present day, there is yet a striking similarity in the rise of his troubles. "I chanced to pass the evening with some friends at the Tavern, and getting into liquor, was persuaded by one of the company (who in that instance was little a Friend to me or to himself) to adjourn to an House, it would be prudent for a man never to set his Foot into. I was too much intoxicated to have any memory of what happened there; but from the Sequel I conclude, with more than Conjecture, that I must have had carnal Commerce with an infected Female." There is a fine biblical rhetoric in the

statement of another patient, who varies periphrasis to plain bluntness in an admirable manner. "Friend," he addresses the physician, "two Years ago led by a wicked Spirit of the night, in whom there was no Truth, I had an affair with one of the Race of Ungodliness who gave me what thy People calleth a Clap. I ran in full fervour of Pain to what thou willst call a Quack, (for he had not been Friend, to what thou callest Universities), he gave me an Electuary which stopt a dismal Running I had, and I went home rejoicing and returning Thanks to the Lord that he had thus delivered his Servant from the Hand of Vengeance." His thanks seem, however, to have been somewhat premature, and are not chronicled when "in three month's Time two Ulcers appeared on the Top of the lustful Member, and one of the round Supports began to swell." So he underwent a salivation, which "sent away the Marks of Satan from my Body." But his trouble with his "Unruly member," as he elsewhere calls it, does not cease here, for the learned physician informs him that should "the Disorder spread to the spermatick Rope, and from thence to the Cavity of the Abdomen, then the Testicles must be cut off for fear of their degenerating into an Abscess or becoming cancerous." Whereupon the miserable man exclaims: "Oh, how desolate and afflicted is thy Servant, O Lord, for a transitory effort; and how deceitful that Piece of Flesh that I had to deal with, even the Flesh of Rebecca. But, my good Friend, I can assure thee that I am Not willing to take away these Instruments of Desire till I have made use of all that thy Business can help me in."

Let us, however, pass over all his long disquisitions upon such subjects as the origin of the fluid in a gonorrhœa, its yellow colour, the structure of the ear and of the eye, the fluor albus, scurvy, and so on, except to note that when dealing with the ear he recommends that the meatus auditorious may be kept clean by washing it with urine, and says that the "most inveterate Deafness may be cured by means of the Eggs of Ants bruised and put into the Ear with the Juice of an Onion": and let us see what are the lines of treatment he

follows, primarly in regard to prophylaxis. A patient having suggested that it might be well that he should hear the physician's "Opinion of a Preservative against the Disorder," is answered, "The most certain Preservative against this Disorder is to live chastly and to avoid Incontinence." Whereupon the patient pertinently remarks, "Sir, I don't consult you as a Moralist but as a Physician." Follows an interlude anent the ethics of prophylaxis, during which the physician, mingling morality with economy, says, "Such a Preservative would, in the opinion of some, be thought an Encouragement to Vice, and hurt many others who, in a great measure, depend on the Cure of this Disorder for their Maintenance." He quotes Fallopius(*De Morbo Gallico*) on the point, whose opinion is that "there are ways of preventing Ulcers arising from Contagion," and he recommends that the penis should be wiped with linen after coitus, the linen having been prepared for action by being steeped in a solution which contains some fourteen ingredients. "In hoc decocto maceretur per noctem pannus linteus purissimus." Further, Fallopius tried this in 1,100 cases, not one of whom was infected, whilst other writers got almost as good results with simple washing and cleanliness. Then there is a consideration of the condom—cundum he calls it—a term more familiar in the writings of American authors nowadays than works written in this country. *The Lexicon of Medicine* states that the origin of the term was in the name of a London physician, called Conton, who lived in the eighteenth century, and first suggested its use. This preventive, epigrammatically described as a "Cobweb against danger, a Cuirass against pleasure," was made, according to Profily, of "lamb's bladder." He quotes Astruc's curious objection to its use: "We 'll suppose," Dr. Astruc says, "the Bladder don't break, but remains entire through all the Act, still all is not safe, neither the Pubes or the Groin are covered; those Parts therefore remain still obnoxious to the spermatick Humour."

In regard to the treatment of the disease after it has actually arisen he speaks with no uncertain voice. The following quotation will give a succinct idea of his procedure, and will at the

same time exemplify his confusion of the varieties of venereal diseases, a confusion common in his time. "The common practice of curing a Gonorrhea is to give Mercur. Sublimat. Dulc., mixed with some purgative medicine, or to give it alone at night, and purge it off the next morning; and then if the Running continues, to give some healing Medicines, and use an Injection to complete the Cure. My new Method is to give, instead of Mercur. Sublimat. Dulc., some Crude Mercury, commonly called Quicksilver, in purging Pills, and then some astringent Medicines, and my Greek-water by injection." He is a firm believer in the value of drinking large quantities of bland fluids; he prescribes barley-water and marsh-mallow as a draught, several pints of this compound to be drunk morning and evening, or a quart of gruel at a time, or of "thin light broth." The patient must not eat "salt or high-seasoned Meat," but anything else evidently that he pleases: or he may drink "common Table-beer, Wine, and Water, or any other innocent liquor," but must refrain "as far as possible" from intemperate drinking. A point to be noted is that he advises that the injection be used after the patient has made water, a matter too often overlooked even at the present time. Though some of his prescriptions include ten or more ingredients on occasions, he seems to place little faith in internal medication, and relies more upon the injections: the medicine which he gives is more of the nature of a placebo, and more for its mental effect. This leads him to a digression on syphilophobia, and he adduces the opinion of the "learned Dr. Frìend" (more correctly "Freind"), that "an honest Practitioner generally finds it more difficult to cure the imaginary Evil than real one," a statement which has lost very little of its applicability even in the present day.

In regard to epididymitis and its cure there is a curious instance given of what the charlatans of those days considered rational treatment; interesting too in this, that even now, when knowledge seems to be widespread, among certain classes connection with a virgin is looked upon as the most efficient treatment of gonorrhœa. It is difficult to understand how such

an idea can have arisen, while the morality of those who suggest and of those who follow such a line of treatment is simply despicable. The patient has seen an advertisement in a newspaper of remedies for the "Cure of almost all Disorders," and has—following the usual custom of the tribe—sent his money in advance. "I was surprised when I saw the Letter which he wrote me, wherein he sent me what he calls a Practical Scheme, and prescribed me to lie with a Woman, if I could, to clean the Spermatick Vessels; and tho' Venery, says he in this Letter, otherwise in the Disease hinders the Cure, yet in your Case would much contribute to cure swell'd Testicles." Both Profily and his patient strongly deprecate such advice, it is gratifying to observe, and the physician recommends a bolus containing cassia, rhubarb, and calomel; a plaster containing, among other ingredients, lupine, fenugreek, rye, and cumin, which is to be applied warm to the part, and the scrotum to be supported by a truss.

Syphilis as an entity, as we have seen, he did not discriminate; but when ulcers appeared on what, in quite Chaucerian phrase they called the "Yard," there were various forms of treatment of a more stringent character; when, too, there were rashes on the body, pains in the throat and head, it was seen that the trouble was more deep-seated. It may be said, in a word, that mercury is some form was the basis of all treatment. There was fumigation, which was directed against the disease when it appeared in the nose or throat, and was carried out by enclosing the patient in a blanket and then throwing a drachm of finely-powdered cinnabar on to a heater which reposed on an earthen platter held on the knees. Interesting in connection with the modern revival of the sarsaparilla treatment by patent-medicine vendors, and even by the medical profession (as in Zittmann's decoction), is the fact that a ptisan or decoction of sarsaparilla and guaiacum is recommended. Inunction was advised and carried out to a degree which would cause alarm now. Unless salivation were so profuse that the expectoration amounted to five or six pints a day it was not considered that a sufficient amount of mercury was

being given, and the patient's mouth had to be ulcerated—" for the spitting depends on that "—his teeth loose, his tongue swollen, his mouth foul, his breath fœtid, and his gums spongy and sore. Little wonder that some preferred their " pox." His speciality, however, was his treatment by mercurial pills, and by these he obtained good temporary results, but when the immediate symptoms had disappeared treatment was discontinued. The natural result was that tertiary symptoms followed at a later date. They were not, however, allowed in any way to detract from the credit of the physician who had effected a " cure " in the primary or in the secondary period. Their full significance was not clearly understood, though the same might with no small amount of justice be said at the present day.

It were too lengthy a task to follow the good doctor into all the minutiæ of his treatment, and would, indeed, serve no useful purpose. A few words may, however, be said of the etiological ideas of those times. They seem to foreshadow in a curious way modern discoveries, including even that of the spirochætes. " I will refer you," he says to one inquisitive patient, " to the sentiments of Abercromby, Deidier, Desault, and others, who are of opinion that the Venereal leaven consists of imperceptible Worms, which, on approaching, are communicated from one Body to another, and afterwards multiply in the Person who has received them." These organisms he designates, in a phrase reminiscent of the delightful Carrollean, " Slithy Toves,"—" Pocky Worms."

So with this prevision let us take leave of this early co-adjutor of the messenger-god in his combats against the afflicted of the fairest of the goddesses, and let us hope that as his work helped the knowledge of his time forward, so this brief epitome will add both to the information and to the entertainment of this later day.

Progress of the Medical Sciences.

MEDICINE.

Infantile Paralysis.—The remarkable increase in the outbreaks of infantile paralysis during the last few years has led to many investigations and a better knowledge of the subject. In the sporadic form it has long existed in most countries, but of late at least seventy epidemics have appeared, a great number of which were in Scandinavia and America, while only two or three small ones have been recorded in this country. In the United States since 1907 a series of serious outbreaks have spread from sea to sea. In 1909 there were 569 deaths reported, and if we reckon the mortality at 12 per cent., there must have been nearly 5,000 persons attacked, of whom a large proportion were crippled for life. McClanahan[1] reported 1,000 cases in one district twenty miles by twenty-four. As usual the season was chiefly July and August. The fatal cases here numbered 137, and were generally due to the respiratory centre being involved. A large number of patients in this particular outbreak recovered without lasting paralysis.

Simon Flexner shows that before reaching America the epidemic form had spread over a large part of Europe, and he thinks it possible that the disease was carried over by Scandinavian immigrants. In America it spread along the chief lines of communication, and behaved much as any other mildly infectious disease. He finds evidence that the disease can be carried by a healthy person after contact with a patient, and that the incubation period is about nine days, though with very wide variations, a time which is ample for the Atlantic voyage.

W. W. Treves[2] has described fully an outbreak of eight cases in England during 1908, and mentions two other small ones. In Bristol some forty cases occurred in 1909, an account of which is in course of publication. In Vienna and Lower Austria 266 cases were seen in 1908, and in Arnsberg 333. In Melbourne Stephens met with 137 cases, with six deaths only, in 1908. An outbreak recorded by Calverly as far back as 1894 showed 136 cases in human beings, and others in cattle and fowls. No pathological examinations were made, and it is possible that this was a distinct disease, but a curious mortality in fowls has been noted in several epidemics.

Treves discusses Wickham's analysis of four Scandinavian epidemics, one of which comprised 1,035 cases. The latter claims to have shown the infectiousness of the disease from instances

[1] *J. Am. M. Ass.*, 1910, lv. 1160.
[2] *Brain*, 1909, xxxii. 283.

where it broke out in a healthy place immediately after the arrival of individuals from an infected one, and in other cases by direct contact. He was thus able to trace it from village to village, and it has since been made compulsorily notifiable in Norway. However, this is no more than occurs with pneumonia, which occasionally takes an epidemic form. There are, as we shall see, other differences in the behaviour of the disease when epidemic, but in typical cases it does not seem that any real distinction can be drawn between the sporadic and epidemic types, either pathologically or clinically, though the propagation of the organism concerned has apparently only been carried out from epidemic cases.

Wickham [1] records the concurrence, among the normal cases, of others showing ascending myelitis, bulbar and pontine inflammation, encephalitis, meningitis, ataxia, polyneuritis, paralysis without febrile or gastro-intestinal symptoms, and abortive forms without paralysis. He found a mortality in 1905 of 11 per cent. in patients under ten, and about 26 per cent. in older persons. In another epidemic we meet with a mortality of 33 per cent. Holt and Bartlett [2] conclude that in a number of epidemics the mortality was 12.1 per cent. They explain this high rate, as compared with that of the sporadic form, by saying that the fatal bulbar cases are not recognised as infantile palsy when met with sporadically. Gowers, [3] in referring to these differences, notes also the number of complete recoveries in epidemics. Thus in Boston out of 628 cases there were 10 per cent. without lasting paralysis. Another point is the number of older patients, and in these the initial symptoms tend to be more severe. It has been commonly held that there are two forms of attack: (1) the common febrile form, lasting some days, with pains in the back and limbs; and (2) a sudden paralysis during perfect health or following a shock or chill. Krause, [4] however, in the Westphalian outbreak, 436 cases met with gastro-intestinal symptoms in 90 per cent. of the cases, and swelling of the intestinal glands, while in certain families some individuals had paralysis and others diarrhœa only. In Hessian and some American cases a great reduction of leucocytes was noticed, but it is not known whether this is universal.

As to the pathology, much light has been thrown on the subject by Flexner and Lewis, Römer, Llandsteiner and Levaditi. They have succeeded in propagating the disease in monkeys for twenty-five generations with the usual paralytic symptoms. Geirwold's diplococcus does not seem to be the causal

[1] *Ztschr. f. klin. Med.*, lxii., 1907.
[2] *Am. J. M. Sc.*, 1908, cxxxv. 647.
[3] *Brit. M. J.*, 1910, i. 305.
[4] W. H. Wynn, *Birmingh. M. Rev.*, 1910, lxvii. 142, and *Deutsche Med. Wchnschr.*, 1909, Oct. 21st.

agent. The real organism is one of the most minute known, and can pass through the finest porcelain filters. An emulsion of an infected spinal cord remains virulent for weeks, and is unaffected by freezing or drying or by the addition of glycerine, though the addition of very weak disinfectants or heating to a temperature of 110° soon proves fatal to its activity. Injections of the spinal fluid do not convey the disease, but an emulsion of the salivary glands or of the cord does.[1] Injections may be made subcutaneously, intraperitoneally, or with more certainty into the brain or under the nasopharyngeal membrane. The last Flexner[2] thinks is the usual route of infection, and the source whence it is scattered about.

The spinal fluid in monkeys, and probably in man, in the earlier stage before the onset of paralysis is opalescent, coagulable, and shows an excess of cells; afterwards it is clear, does not clot, but shows some excess of lymphocytes, differing in this way from that of epidemic meningitis. An attack in man gives immunity for an unknown period, but at present no attenuated virus has been found capable of preventing the disease. Lumbar injections of serum from immunised animals or men, given early, seem to postpone or sometimes to prevent paralysis, and possibly an effective serum may be eventually obtained from the sheep. However, the subject is in the experimental stage, and no reliable remedy can be offered at present. Urotropin has been recommended on theoretical grounds. Formaldehyde seems effective as a disinfectant and for inhalations. No animals except monkeys have been successfully infected by human poliomyelitis, though several species of animals suffer from a similar disease.

A research is now being made as to whether the nasal secretions convey the disease, whether there are intermediate hosts, what is the period of infectiousness, and how a diagnosis can be made before paralysis comes on. Williamson thinks that the loss of the Achilles reflex is a useful distinction from other forms of paralysis, and notes that the "vibrating sensation" is not lost, as it may be in peripheral neuritis.

F. E. Batten[3] discusses two cases in which the disease seems to have been acquired during intrauterine life. Both pathologically and clinically they were typical cases.

Since in epidemics cases are seen where the brain only is affected, or no paralysis at all occurs, the name poliomyelitis becomes inappropriate, and this leads to the question whether certain groups of cerebral affections which occur sporadically are not after all forms of infantile palsy. Richard Miller[4] places under this head (1) encephalitis of the cortex (Strumpell's

[1] Williamson, *Med. Chron.*, 1910, lii. 32.
[2] *J. Am. M. Ass.*, 1910, lv. 1105.
[3] *Brain*, 1910, xxxiii. 149
[4] *Practitioner*, 1910, lxxxv. 96.

hemiplegia of children); (2) certain affections of the cranial nerves and the bulb; (3) Batten's acute ataxia with hypotonus; (4) Gordon Holme's acute tremor with hypertonus; and (5) thalamic encephalitis with athetosis. He argues that these are usually due to infantile palsy, attacking the brain instead of the cord. Leonard Parsons[1] supports this view in a most interesting paper, and gives two cases in which typical lesions of infantile paralysis followed attacks of tremor of the Gordon Holmes type. If these various theories are proved, our conception of infantile paralysis will be much extended. It will include both sporadic and epidemic cases, and the symptoms will vary with the part of the nervous system which happens to be attacked.

* * * *

Radioscopy of the stomach is of great value in diagnosing dilatation, new growths, pyloric stenosis and the hour-glass condition. Some serious poisoning cases have arisen from the use in this method of bismuth nitrate in large doses. A. W. Crane[2] still recommends it, but follows it up with a full dose of Epsom salts. Gray[3] Hürter and Jordan use the carbonate in doses of fifteen grains up to three or four ounces. Hertz[4] employs an ounce or more of the oxychloride. Thus Hürter gives a capsule holding fifteen grains to show the lower margin of the stomach, then half an ounce in a wineglass of water to show the contour, with a seidlitz powder to show up the fundus, or a meal of porridge mixed with bismuth may be used. Crane gets good results from photos, but others prefer the screen. Lange[5] showed an excellent sketch from the picture of two cases of carcinoma, where the affected area was a blank translucent space with irregular edges. Hürter[6] finds that in malignant disease the shadow is narrow, and the pylorus is not carried far to the right, all of which is reversed in benign affections. Again, on pressing the abdomen with the finger-tip a large, irregular, clear space appears. In the normal person this spot is very small, and in simple inflammation large but regular. Hertz and several others hold that in health the lowest part of the greater curvature usually reaches below the umbilicus when the patient is upright. The body of the stomach is then nearly vertical, and the dome-like fundus lies above the cardiac orifice and contains gas. The pyloric vestibule turns upwards and backwards at less than a right angle to the cardiac part. The shape of the whole organ is very much that of a long stocking, and Hertz shows that when empty

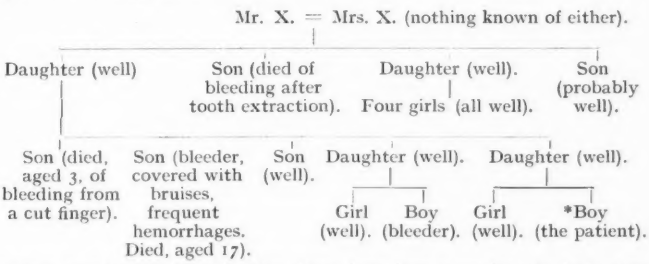
[1] *Birmingh. M. Rev.*, 1910, lxvii. 148.
[2] *J. Am. M. Ass.*, 1909, liii. 1962.
[3] *Lancet*, 1908, ii. 224.
[4] *Quart. J. Med.*, 1910, iii. 373.
[5] *J. Am. M. Ass.*, 1910, liv. 873.
[6] *Arch. f. Verdauungskr.* 1910, xvi. 202.

the lower two-thirds contract to form a rod or tube without a lumen, so that it resembles a pear with a very long, curved stalk. This stalk dilates as food descends, and when the latter reaches the middle of the stomach peristaltic waves commence to drive it forwards. Carbohydrates leave the stomach quicker than proteids, and these sooner than fats. Grützner argued that later portions of food remain in the centre of the mass undergoing salivary digestion, while the first portions eaten are acidified and pass on; but Hertz shows that in man they tend to mix quickly. Still, in taking out a test meal it is important to remove the whole contents, and not to estimate the HCl. from one part only. Water and egg albumen leave an empty stomach rapidly without causing any flow of HCl. Hence they are often retained by patients when even milk is vomited. The increased peristalsis in obstruction is easily seen, and the position and character of œsophageal strictures.

GEORGE PARKER.

SURGERY.

Hæmophilia.—This disease is a remarkable illustration of inheritance by atavism, the general law being that the boys suffer from the disease, but do not transmit, and the girls do not suffer but do transmit. A number of family histories have now been followed for generations, including the Appleton-Swain family in the States, and the Mampel family in Germany, which latter has recently been studied by Lossen,[1] who presents a genealogical tree extending over 100 years, and including five generations with 212 individuals. Sir Almroth Wright[2] gives tables of three other bleeder stocks. The following is a previously unpublished family history obtained by me from a patient living near Bristol:—


Mr. X. = Mrs. X. (nothing known of either).
Daughter (well)
Son (died of bleeding after tooth extraction).
Daughter (well). Four girls (all well).
Son (probably well).
Son (died, aged 3, of bleeding from a cut finger).
Son (bleeder, covered with bruises, frequent hemorrhages. Died, aged 17).
Son (well).
Daughter (well).
Daughter (well).
Girl (well).
Boy (bleeder).
Girl (well).
*Boy (the patient).

* The boy in question bled for three days from a cut lip; he had often bled before. The nurse sat him on the edge of the bath to wash him, and a bruise came out across the buttocks.

By combining the published tables it is possible to obtain an answer to several interesting questions. The well-known

law of inheritance is thoroughly substantiated in all five series, that is to say, the females transmit to their sons, but do not themselves suffer. The males do not transmit; of eight males in the Mampel family who had male children only one passed on the hemorrhagic diathesis, and the one exception married a first cousin who belonged to the same stock; they had one bleeder son. In one of Wright's families, however, a hæmophiliac had a normal daughter, but her son was a bleeder.

There are usually a few sons in the afflicted family who escape. My table shows two such. In the Mampel stock only thirty-seven sons out of eighty-two whose mothers transmitted were bleeders, but in Wright's tables only seven escaped out of thirty-one. Moreover, some of the females do not transmit—five out of sixteen in the Mampel family had healthy sons.

Two other questions arise. Do girls ever suffer? And does the disease ever arise *de novo?*

In the published family histories the females certainly seem to escape. Sometimes there is a record of menorrhagia, or post-partum hemorrhage which is probably accidental. But cases are described from time to time which would be regarded as perfectly conclusive of hæmophilia if only the subject had been a boy and there had been bleeders in the family. A little girl who died last year in the Infirmary of dental hemorrhage which nothing would stop may be quoted as an illustration. A very convincing case is given by Squire [3] of a female child who was almost always marked with bruises, who on four occasions bled for days from insignificant abrasions, and on a fifth recurrence of the hemorrhage bled to death from a tiny point inside the mouth. There were no other bleeders in the family. Osler [4] gives instances of cases arising *de novo*, one being in a woman. We had in the Infirmary four years ago a fatal case of hemorrhage from the puncture of a tin-tack inside the cheek in a shoemaker, with no bleeder relatives.

We will barely mention the *symptoms* of hæmophilia, the purpura, epistaxis, hemorrhages, articular effusions, etc. It is, however, worth noticing that in a number of cases the nature or location of the injury is of importance. Pricking the finger to obtain a blood-drop does not usually induce hemorrhage, nor does abstracting it from a vein by means of a syringe; the elastic skin closes over the wound. Some bleeders only pour blood when the injury is above the neck; cuts on the limbs or trunk may produce no more than an ordinary flow. Sir Almroth Wright believes that there are periodical variations in the hemorrhagic tendency. The females in a bleeder family are said to be abnormally fertile.

Pathology.—Three deviations from normal have been described in hæmophiliacs.

It has been stated that the blood vessels are abnormally

thin (Virchow's hypoplasia of the arteries). In the great majority of instances there is no abnormality in the vessels at all to the naked eye or microscopical examination, and in any case this could scarcely furnish the explanation. The hemorrhage of hæmophilia is a capillary hemorrhage, and the capillary walls could not possibly be thinner than they normally are. The effusion obtained by dry cupping is no greater in hæmophiliacs than in normal people (Morawitz and Lossen).

In the great majority of cases, and perhaps in all, the coagulation time of the blood is much extended. Instead of the normal five to ten minutes, it may be delayed to twenty minutes, one hour, or even longer. Wright gives a number of instances in which a normal time is found in the non-bleeder members of a family, but an extended time in the bleeders. The blood for testing was taken from the finger or from a vein. His observations have been confirmed by Sahli, [5] Addis, [6] and all recent observers. It is true that some writers report no delay in the coagulation time when the blood from the bleeding point is examined, but apart from the many fallacies of all coagulation-time experiments, such as imperfect tubes, varying temperatures, and inclusion of preformed clots, it must also be remembered that the blood always acquires more fibrinoplastic material after severe or prolonged hemorrhage, and hæmophiliacs are no exception to the rule. Indeed, the mouth may often be full of clots, and in many cases the bleeding is eventually checked by coagulation in and about the damaged vessel, though it may be that a dangerous amount of blood has been lost first. Addis shows that the delay in the coagulation time runs parallel with the liability to severe hemorrhage.

Thirdly, the leucocytes are nearly always diminished in number, and particularly the polymorphonuclears. The females of a bleeder family often show this same characteristic.

Perhaps we are not yet in a position to arrive at a diagnosis of the exact cause of the delay in the coagulation time. The conversion of fibrinogen into fibrin takes place under the influence of a substance called thrombin, or fibrin ferment, though it is not really a ferment. This does not exist preformed in the blood, or generalised intravascular thrombosis would take place. It is only formed by the interaction of calcium salts, thrombogen (prothrombin), and damaged cell-nuclei. In ordinary, the last of these is furnished by the cells which are cut through or crushed by the instrument inflicting the injury. And as the endothelial cells lining the blood-vessels are not immortal, and their disintegration would initiate thrombin formation, and thus coagulate the fibrinogen, provision is made that the liver should shed out into the blood an anti-thrombin sufficient to prevent this, but not sufficient to interfere with our defence against external hemorrhage. The thrombogen is

probably derived from leucocytes, but is intimately associated with fibrinogen.

Hæmophilia might therefore be due to a defect in the amount either of fibrinogen, of thrombogen, or the material (thrombokinase) supplied by the cell-nuclei, or of calcium salts, or it might be due to an excess of anti-thrombin from the liver. It is certain that the fibrinogen is normal in amount, and there is no evidence of any lack of calcium. The cases in which bleeding from the mouth was excessive, but bleeding from the limbs did not pass beyond normal limits, are in favour of the theory that the cell-nuclei in the danger zone contain too little fibrinoplastic material, but Addis shows that damaged tissue, such as testis, can only very slowly induce clotting in hæmophiliac blood, so that we must look elsewhere for the real explanation.

Indeed, it is not clear that the delay in the coagulation time is due to a deficiency in quantity of any of the ordinary fibrinoplastic elements of the blood, Addis now concludes that the essential trouble is a perversion of the thrombogen, which yields a normal thrombin, but yields it too slowly. Haemophiliac fibrinogen is readily clotted either by normal or haemophiliac thrombin. Washed corpuscles from normal blood immediately clot haemophiliac blood (Sahli, Addis). The blood will clot well where it is in contact with the tissues, but the thrombin which should extend to and coagulate the central parts of the wound acts exceedingly slowly or not at all, so that the peripheral fibrin may get dislodged for lack of reinforcement, and then the bleeding starts again.

Treatment.—The women of bleeder families ought not to be allowed to marry, or at least they should not have children. Their male offspring should be wrapped in cotton-wool, figuratively speaking, all their days.

If the ordinary methods of treatment fail (pressure, adrenalin, rest), some of the following special devices should be resorted to.

Weil[7] pointed out that injection of horse serum in a bleeder was followed after forty-eight hours by a diminution in the coagulation time, and the treatment has been a good deal used since. Our experience at the Infirmary is not favourable, and Sir Almroth Wright, thinks it acts too slowly to be of practical value. The most convenient form in which to obtain horse serum is diphtheria antitoxin.

Wright[8] makes three important suggestions :—

(*a*) The administration of calcium lactate or magnesium carbonate or lactate in fifteen grain doses to children, or sixty grains to adults, followed by half-doses daily for three days. He allows that the treatment may fail, and that it may even make matters worse if too large quantities are given. These drugs must not be administered hypo-

dermically, or sloughing results. The causes of failure are twofold: the drug may not get absorbed; or the blood content of calcium may already be the optimum. It is well known that too much calcium delays coagulation.

(*b*) The administration of CO_2. This may succeed when calcium salts fail. It may be obtained from a cylinder of liquid CO_2, or from a Wolff's or Kipp's apparatus, containing marble and HCl, and only a small stream should be supplied. Dyspnœa should be avoided. Venous blood clots more easily than arterial; this fact is responsible for the introduction of the method.

(*c*) Physiological styptics. Wright regards this treatment as of great value in stopping the flow, but like other styptics, they cannot cause intravascular clotting, so other methods should be adopted as well. The advantage over iron and tannin preparations is that they are painless, and do not cause sloughing or suppuration. Minced thymus with saline (one part thymus to ten parts saline) is the best. It is slower in action than the escharotic styptics, but produces abundant firm clot.

As a prophylactic against hemorrhage, Wright gives thymus tabloids (up to 100 grains daily).

There remains one last resort in the most desperate cases. Goodman[8] has published a well-written, almost dramatic description of his treatment of a child dying of hæmophilia. He was a Jewish boy, aged 2½, a well-known bleeder, with other bleeders in the family. He was admitted to hospital for a cut inside the cheek, which bled slowly but incessantly for two days. The usual pressure, adrenalin, styptics, diphtheria, antitoxin, and calcium salts were tried in vain. Finally the child lay motionless and pallid, the hæmoglobin 12 per cent., and the hemorrhage continuing. Goodman then decided to inject normal human blood. A donor, not a relative, was tested by Wassermann's method, which was negative. Under novocain anæsthesia his radial artery was connected by an Elsberg cannula with the femoral vein of the child. There were some initial difficulties in getting a good flow; hot cloths had to be applied, and finally the basilic vein was substituted for the femoral, on account of differences in the level of the patients. The transfusion continued for twenty-eight minutes. During this time colour gradually mounted up in the cheeks of the little sufferer, the breathing became audible once more, the almost watery blood acquired its normal hue, and when the process was stopped the child's hæmoglobin was 70 per cent. The significant point was that the bleeding was instantly staunched. Both made an uneventful recovery. The donor had to rest for several days.

This interesting case does not stand alone, and obviously

no patient should be allowed to die without transfusion in future. Animals' blood will not do for large transfusions, on account of the hæmolytic phenomena. The connection between the two patients may be made by dissecting out under local anæsthesia a few inches of artery and vein respectively, and connecting them either by a short oiled glass cannula or by Carrell's immediate suture. The latter method has been adopted with success for direct transfusion in septicæmia as well as in hæmophilia, but the technical difficulties may be considerable.

When a healthy adult is used to supply blood to an infant, the donor suffers no ill effects, but a period of rest is desirable. In many cases, especially if older children or young adults are to be transfused, it would be well to provide two donors, either consecutively or simultaneously.

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[4] **Osler,** *Lancet*, 1910, i. 1226.
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[6] **Addis,** *Quart. J. Med.*, 1910, iv. 14; *Brit. M. J.*, 1910, ii. p. 1422.
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A. RENDLE SHORT.

OBSTETRICS.

Uterine Fibroids.—The life histories of patients who suffer from large uterine fibroids are in many cases interesting studies. Few practitioners of over twenty years' standing have not had experience of one at least of these, and many have been able to observe several.

Any attempt to present complete records of a number of cases of fibroids, especially when the histories are fairly complete, must be of considerable value, and an attempt to collect a long series of such cases by obtaining information from several observers would give some extremely interesting information as to the results to the patients of non-interference.

A. J. Wallace[1] publishes the after-history of ten of such cases, giving in each case diagrams representing the size and position of the tumour in various stages of development or retrogression. The tumour in every case was large, and produced symptoms such as pain and hemorrhage.

In eight out of the ten cases observed incomplete shrinking took place, and in three cases the decrease in size was very rapid. It would seem reasonable to suppose that in these

[1] *J. Obst. and Gynæcol. Brit. Empire*, 1910, xviii. 20.

cases the rapid diminution was the result of the disappearance of œdema. In one case the disappearance took place before the menopause; in three shrinking commenced before the menopause; in three at the menopause, and in three after its onset. It is doubtful whether in any one of the ten cases the presence of the tumour had any effect on the condition of the heart, although the hemorrhage due to the tumour apparently affected the heart unfavourably.

The history after the menopause showed good health in four out of the ten. In one the menopause has not yet occurred, but her health is good. Of the remaining five, one died after years of invalidism, three remain invalids, and one, although otherwise fairly well, is blind.

These histories do not predispose to a favourable view of the results of palliative treatment. In only one case among those six in which a state of moderate comfort was reached, could it be said that the patient gained from non-interference moderate comfort was only arrived at after years of suffering and broken health, while even this cannot be permanently depended on when the degenerative changes possible, even after the menopause, are borne in mind.

Fibromyoma in Pregnancy.—At the meeting of the British Medical Association on July 26th to 31st a discussion took place on this subject, which was initiated by Dr. Walter Tait. Many speakers related their experiences as regards this complication. Among the accidents described were the following:—Premature interruption of pregnancy, necrobiotic changes of the tumour, difficulties in the removal of the placenta, ruptured uterus, unbearable pain, axial rotation of the uterus, rapid increase in the tumour with abdominal pressure symptoms, delivery obstructed by the presence of a tumour in the pelvic canal. The opinion of the majority of the speakers showed that, although in a large proportion of cases fibroids occurring as a complication of pregnancy do not cause serious or dangerous symptoms, these latter do arise in a certain number of cases, and may require to be dealt with by operative measures. Several cases were reported where the symptoms present necessitated the removal of the uterus by sub-total hysterectomy, and many others in which the tumour was removed by myomectomy without interfering with the course of pregnancy, delivery taking place at term. The general trend of opinion as regards operative interference seemed to be that laparotomy having been decided on, the operator should in all cases be prepared to remove the uterus and tumour together, but where possible, operative interference should be restricted to the removal of the tumour itself by enucleation, leaving the uterus intact. Even tumours with broad attachments can be removed by this method without terminating pregnancy and

one case has been described in which the uterine mucosa was exposed by the removal of the tumour, but the pregnancy still continued. The chief danger is the hemorrhage from the raw surface left by the removal. This can generally be dealt with by suturing in layers. In any case of unusual difficulty or danger the removal of the uterus can always be adopted as a possible termination.

Myomata in Pregnancy, Labour and Childbed, and their Influence on Conception.—F. von Winckel's paper[1] deals chiefly with a monograph by Theodor Landau on myomata in pregnancy, labour and childbed, and in the first place he shows the rapid diminution in the mortality rate of operations for their removal; thus in 1885 the mortality was between 30 and 40 per cent., twelve years later 5.6 per cent., seven years later 4.6 per cent. In the last five years 283 operations by the brothers Landau resulted in two deaths, less than 1 per cent. This is in accordance with the experience of others. The constantly diminishing mortality from the severe operations necessitated for the relief of these conditions demonstrates the decrease in the danger due to improved technique.

Von Winckel states that Landau, contrary to the opinions of other observers, finds that uterine myoma is a disease of youthful sexual life. Ten per cent. of the cases operated on by them were found in women between twenty and thirty years old. Again, with regard to the fertility of women suffering from myoma, Landau found that the majority of cases (about 72 per cent.) had been fertile, and of the remainder only a few were suffering from conditions which would have made pregnancy unlikely. It seems evident, therefore, that although relative sterility has been found by a large number of observers to accompany the presence of large fibroids, this by no means necessarily follows, and pregnancy is always possible, provided that the continuity of the uterine cavity is not definitely interfered with. Consequently it is found, as is is to be expected, that quite a fair proportion of pregnancies occur in myomatous uteri, and that in a certain proportion of these cases symptoms due to the presence of myoma in pregnancy are likely to be met with.

Krusen[2] enumerates the dangers which may arise when fibroid tumours complicate pregnancy and the puerperium. The growth may rapidly increase in size; this is due rather to œdema than to pure hypertrophy. Twisting of the pedicle may occur in pedunculated growths, leading to gangrene and peritonitis. Malpresentations occur in about 49 per cent. of

[1] *München. Med. Wchnschr.*, 1910, lvii, 1698. Quoted in *J. Obst. and Gynæcol. Brit. Empire*, 1910, xviii. 282.

[2] *Am. J. Obst.*, 1910, lxi. 458. Quoted in *J. Obst. and Gynæcol. Brit. Empire*, 1910, xvii. July.

cases. The presence of adhesions may produce severe symptoms, similar to those found in impaction of the retroverted gravid uterus. Tubal pregnancy may be caused by pressure of the fibroid on the tubes. Normal involution is often seriously impeded, hemorrhage and septicæmia both being liable to occur. This is especially the case after abortions. Rupture of the uterus due to thinning of the wall in the neighbourhood of the tumour is possible. Aggravated pressure symptoms and degeneration of the cardiac muscle, and also of the renal and hepatic epithelium, are also met with. Placental adhesions and ineffective uterine contractions are shown to be more frequent. The presence of the tumour may give rise to displacements of the uterus, and occasionally lead to axial rotation.

Krusen does not favour myomectomy during pregnancy, and advises supra-vaginal hysterectomy where urgent symptoms due to pressure are observed, or where the growth is apparently the subject of degenerative changes.

E. H. Robinson[1] deals with the question of myomata which become separated from the uterus and form attachments to other organs, from which they derive their blood supply. He shows that these separations take place first by uterine contractions; secondly, by growth along the line of least resistance, and thirdly on account of unequal blood supply to different parts of the tumour. These considerations would lead, as regards the first, to expulsion in a certain number of cases of submucous fibroids; but the same conditions occurring in the sub-serous variety will lead to the formation of the so-called parasitic myomata. This condition is a comparatively rare one, as Kelly and Cullen only met with two instances in 1,764 cases.

The process of separation is necessarily associated with marked circulatory disturbance in the tumour, its attachment to the uterus becoming more and more circumscribed, with a proportionately diminishing blood supply from the uterus, until this finally ceases altogether. Usually degenerative changes occur before separation is complete, and the tumour then becomes a foreign body lying within the peritoneal cavity. Adhesions then form to the neighbouring organs, such as the omentum and intestines, and a new vascular supply is obtained from these, consisting of thin-walled, much enlarged omental vessels spread out over that portion of the tumour which is adherent to the omentum, with much resulting risk to the patient and the possibility of hemorrhage, which is apt to be excessive and stopped with great difficulty, occurring during an operation for its removal.

Richardson relates a case of the kind. A multipara, age 38, was admitted complaining of pain and swelling in the lower

[1] *Surg. Gynec. & Obst.*, 1910, xi. 297.

abdomen. A firm tumour with an irregular surface was felt situated in the region of the umbilicus about the size and shape of the normal kidney. The uterus was found to be about three times the normal size, its enlargement being due to a fibroid in the fundus. No connection could be detected between the movable tumour above and the uterine fibroid. The abdomen was incised, and the movable tumour at once presented. It was extremely dark in colour, with a lobulated surface, and lay half buried in loops of small intestine, the anterior surface adherent at one point to the parietal peritoneum. From its colour it was obvious that degenerative changes were taking place. The tumour was removed, leaving a raw surface over the small intestine, which was covered in with peritoneum after the various adhesions of the small intestine had been separated. Convalescence was uneventful. When cut into the parasitic tumour was found to be a degenerated myoma which had obviously separated from its attachment to the uterus.

Stone[1] reports on 150 cases of fibroids operated on by him, and in addition gives numerous extracts taken from the records of similar cases published by operators. Among some of the interesting facts recorded by him are some relating to the association of malignant disease and fibromyoma. He is of opinion that five per cent. of all tumours diagnosed as fibromyoma before operation would prove to be malignant.

Fehling, Hofmeier, Winter, Scharlieb, Freund and Haultain have reported between them 3,661 cases of fibromyoma in eighty-one, or 2.2 per cent., of which carcinoma was found. This figure would appear to be the average.

As regards sarcoma, Winter found sixteen in 500 cases of fibromyoma, or 3.2 per cent. Stone himself met with three cases in his series of 160. Bland Sutton, it should be noted, however, denies that sarcomatous degeneration occurs in fibromyoma, and states that these are sarcomatous from the beginning. (The writer has met with three cases of sarcoma in, and one of adenocarcinoma with, fibroids in the last three years.)

The mortality rate of fibromyomata when not operated on is so variously stated by different observers that it is difficult to reconcile such figures as those of Noble (thirty to thirty-eight per cent.), Keith (ten per cent.), and McDonald (eight per cent.) with those of Roger Williams (.05 per cent., or one in 2,000). The mortality of hysterectomy for fibroids is shown to have fallen enormously during the last few years. Stone, however, remarks very justly that a low mortality rate may mean a careful selection of cases and the exclusion of those in obviously bad health.

It would appear that the mortality rate after operations for

[1] *Am. J. Obst.*, 1910, lxii. Sept.

fibromyoma might fairly be expected to vary from about three per cent. for selected cases to nine or ten per cent. if a large proportion of complicated cases are included.

Savill[1] relates some experience of the treatment of a case of fibromyoma with X-rays. She found that although the size of the tumour did not diminish, her patient's health, much deteriorated by hemorrhage, improved owing to the cessation of the latter after over forty applications of the rays in small doses. She quotes Bordier's experience with regard to the reduction of these growths after a prolonged course of X-ray treatment, and concludes that in her opinion this method of treatment, judging from her case, and those reported by other workers, has a considerable future.

The following conclusions may be drawn from the above :—

(1) That non-operative treatment in the hope of the disappearance of the tumour after the menopause, means years of invalidism, without the certainty of restoration of the patient's health, and liability to degenerative and possibly malignant changes.

(2) The possible development of malignant disease is a very real danger in this case, although the percentage of such cases is not large.

(3) Fibroids in themselves cause a definite rate of mortality.

(4) Fibroids occurring as a complication of pregnancy may cause severe and even very dangerous symptoms, and that when these occur operative treatment is indicated.

(5) When, under these last circumstances, interference is indicated, myomectomy should be performed if possible, but in a large number of cases total or sub-total hysterectomy will be required.

WALTER C. SWAYNE.

Reviews of Books.

Congenital Dislocation of the Hip. By J. JACKSON CLARKE, M.B., F.R.C.S. Pp. vi, 92. London : Baillière, Tindall and Cox. 1910.

Books nowadays often contain descriptions of so many different surgical methods that a reader more or less unacquainted with the subject finds it quite impossible to determine which is the best plan to adopt in the particular case under observation.

In this book the case is not so ; the lines laid down by Lorenz are acknowledged and strictly followed. Added to this we have

[1] *Lancet*, 1910, ii, 1132.

the author's own experience in about forty cases, extending over a period of more than five years. No wonder, then, that the book is full of practical details, and though small gives a fairly complete review of the whole subject.

Too little space has been allotted to diagnosis, considering that the disease is so uncommon except in the clinics of surgical practice at a hospital. Many cases are quite obvious, but others, equally important, often present difficulties, especially when a good X-ray plate cannot be procured.

The author has devised a more simple operation than the open one practised by Lorenz. It has been too recently introduced for a reliable opinion to be formed upon its merits, but it is rational, and bids fair to give good results. It is only adopted in relapsed cases, or in those which come late under observation. The book should prove a very useful monograph.

Urgent Surgery. By FÉLIX LEJARS. Translated from the Sixth French Edition by WILLIAM S. DICKIE, F.R.C.S. Vol. I. Pp. v, 580. Bristol: John Wright & Sons Ltd. 1910.

The high praise we have given to the first volume of this work can be accorded equally to the second. It is a beautiful exposition of surgical art characterised by marked individuality. The illustrations are particularly fine, although we are more accustomed to gloved operators who are either beardless or masked. Attention may be drawn in particular to the chapters on herniæ, fractures and dislocations, which are especially good and contain many suggestions for the thoughtful surgeon.

In view of the prominence given to massage in the treatment of fracture, it may be well to quote the author: "Nowadays it is recognised that there is quite a group of fractures which ought to be treated exclusively by massage. . . . The general rule is to restrict the stage of immobilisation to the shortest time necessary for the important process of consolidation; it is none the less true that every fracture which is displaced or susceptible of displacement ought forthwith to be reduced and immobilised."

It is of interest to note that Lejars employs Reverdin's needle very generally, even for intestinal suture; and that his description of fractures at the elbow-joint is more consistent than is usually found in text-books. There are few surgeons who would not gain much by the study of this praiseworthy effort of a French surgeon, who has so well succeeded in his intention to write what he has lived, and who has presented the profession with a book of valuable experience, artistically illustrated and pleasurable to read.

Memories of Eighty Years. JOHN BEDDOE, M.D., LL.D., F.R.S. Pp. x, 322. Bristol: J. W. Arrowsmith. 1910.

Rarely does it happen that a worthy octogenarian autobiography is possible, but the writer of his own life history is the one person who can do it best, if his mental powers are equal to the task. Dr. Beddoe tells us, in his preface, that these memories have scarcely any basis of journal or record. It follows that his memory must be one of the best, and his mental powers unflagging.

This is all the more remarkable as he gives a graphic description of the difficulties of his friends in rearing him up to manhood. We read of him as "a sickly child," whose parents did not allow him to be taught to read or write, "often ailing in my childhood." Again, "My school days were much broken into by illness; an attack of rheumatic fever kept me long at home, one of typhoid followed, and later on dysentery." In spite of this he became, at seventeen, head of the school, Bridgnorth Grammar School, but "I had not strength for such a position." Games were abhorred, and finally "I broke down physically, and had to give up thoughts of the University." At twenty heart symptoms are mentioned. "I was forbidden to study," but in spite of this he read up Physiological Chemistry, in view of the dyspepsia from which he often suffered, and in anticipation of the modern method of calorics, he adopted a method of food valuation of his own. On the advice of Sir Charles Hastings he began to think that he would be better qualified to succeed in medicine than in law; accordingly was entered at University College, London, and this in spite of "the proverb that a physician does not get bread until he has no teeth wherewith to eat it. In my case it was literally fulfilled." After a winter of hard study we find mention of the onset of pulmonary symptoms; a year later he was still suffering from both pulmonary and cardiac troubles, and though active in habits, he was weak and the muscular development was poor. However, he learnt, at the age of twenty-four, that slow, deliberate climbing would strengthen an irritable heart, and we find him climbing the Cumberland mountains, sketching on Dungeon Fell and at the top of Harrison Stickle, 2,400 feet, also climbing a steep chimney on Scawfell Pike, and then triumphing over his comrades by running to see the Cathedral at Amiens during a halt of the train.

From this time onward we find little record of physical disability, but we note that at the age of fifty-nine he was spoken of as "our venerable friend." This description was very appropriate when he appeared in fancy dress as Melancthon or Avicenna, but the writer well remembers a remark of the late Dr. Marshall that "Beddoe had always been a Methuselah." Chapter IV contains the story of his life as one of the Civil

Medical Staff in Asia Minor and the Crimea. Chapter VII gives many anthropological reminiscences, and other chapters describe his travels in Ireland, Bretagne, Auvergne, and Australasia. The book is full of interesting stories, many of them very humorous and full of life. We can only offer our cordial congratulations to Dr. Beddoe that, in spite of his early years of weakness, he still retains a vitality far in excess of his years, and that he is able to give so good a story of his life conquest of infirmities and weakness from which many would have given up the contest. We trust he may maintain the contest for many years more, and give us further encouragement and instruction.

Mentally Deficient Children. G. E. SHUTTLEWORTH AND W. A. POTTS, M.D. Third Edition. Pp. xviii, 236. London: H. K. Lewis. 1910.—Dr. W. A. Potts, of Birmingham, has been called in to assist in writing the third edition of Dr. Shuttleworth's well-known manual, which has also been translated into French since the second edition appeared. A new chapter on the medical examination of children requiring special instruction has been added, and much new material has been incorporated in the other chapters. The report of the Royal Commission on Care and Control of the Feeble-minded has provided much of this, and the influence of the newly-introduced medical examination of school children is apparent throughout the book. The medical practitioner will find in this small volume a vast amount of information to help him in distinguishing between the various types of mental defect, and to guide him in the education of his patients; the social reformer will also find the broad economic aspects of the matter concisely treated. It is good to find how much can be done for the most deficient minds, and to see how thoroughly the public conscience is awakening to the inadequacy of the provision for suitable care and control in this country. The book is judiciously paragraphed, and easy to read. The authors have sinned in one small matter—the spelling of proper names: "Warren" Tay and "McGarrison," for example. In this respect, however, they are in distinguished company. Two excellent features call for special remark in conclusion: the book contains a number of good photographs and diagrams, and there is a bibliography in which all important contributions to the subject are included.

Three Lectures on Epilepsy. By W. ALDREN TURNER, M.D. Pp. x, 62. Edinburgh: James F. Mackenzie. 1910. **Epilepsia.** *Revue Internationale.* Official organ of the International League for dealing with Epilepsy. Published Quarterly. Parts I, II, III. London: Williams and Norgate. **Insanity in Every-day Practice.** By E. G. YOUNGER, M.D. Second Edition. Pp. viii, 124. London: Baillière, Tindall and

Cox. 1910.—Dr. Aldren Turner's Morisonian lectures are reproduced in booklet form, and constitute a lucid and concise account of the many problems in epilepsy, and a survey of the treatment of this malady. This small work will be found to contain much more information than its size suggests, and it should be very useful to the practitioner who wishes to be informed as to the latest views and results of research. *The Quarterly Review of Epilepsy* is devoted to a survey of international work done, and to the production of original contributions prepared for it. The large amount of literature in connection with epilepsy demands such a publication, which summarises the results of European and English research. The names of the editorial staff are guarantees that the articles both original and selected will be well chosen. Dr. Younger's book is a good brief work for the student and busy practitioner. It is clearly written, full of sound, practical instruction, and handy for reference. The author has been at pains to avoid controversial matter, and presents his types of insanity in the clear and discrete form essential to a short, practical work. The section on procedures under the Lunacy Acts should be of much service to the general practitioner.

Index of Symptoms: with Diagnostic Methods. By RALPH WINNINGTON LEFTWICH, M.D. Fourth Edition. Bp. xiv, 451. London: Smith, Elder & Co.—This small volume demands more than a superficial examination. Its concise tabular form and general arrangement might lead a careless reader to consign it to the class of "cram" books. But as a matter of fact it is much more than this; it is a very successful attempt to classify symptoms under headings as a help to diagnosis, and the completeness and skill with which this has been done is worthy of great praise. Going carefully and critically through the pages it is difficult to find any errors either of omission or commission, and the short explanatory paragraphs are full of excellent matter, useful alike to the practitioner and the student. The brief but interesting account of some of the fallacies of diagnosis; the tables showing the incidence of sex, age, occupation and so forth in the causation of disease; the valuable "tips" as to the position of pain in the back, abdomen, etc., as indication of certain diseased conditions; the epitome of tests for urine, stomach contents, sensation, etc., etc., are all noticeable for their terseness, accuracy and clearness of style. It is a book that no amount of work in a library could render possible; it is obviously the outcome of extensive knowledge and experience, and as such may be considered as a guide, not merely a compilation. The author is fully justified in expressing the hope "that the indexing and collection of symptoms made for the first time in this book, will lead in the future to the erection of semeiology into something like a true science."

Memories. By a Hospital Nurse. Pp. viii, 168. Bristol: John Wright & Sons Ltd. 1910.—This little work, as stated in the preface, claims to be an account of a nurse's life in the wards and at private cases—simple narratives of very ordinary everyday occurrences, with occasionally thoughts and comments thereon, told in a plain and pious manner. Like other records of a somewhat similar nature, the story abounds in touches reminding one of Esther Summerson in *Bleak House*. Hidden, or only partially hidden, beneath the surface of humility is the implication of self-denial and goodness, a state of mind common enough amongst good women, but much disliked by most men, whether good or bad. The authoress, in fact, goes perilously near self-glorification. She appreciates clearly and well the domain of the nurse, but cannot resist the temptation of talking of matters that no nurse should feel confident to give an opinion on. She even goes so far as to say of lunacy patients: "All such sufferers with whom I personally have had to do recovered in a comparatively short time." There is an air of veracity about the trivial incidents narrated which gives an interest to the book, and probably many of the public, who like a glimpse into the medical or nursing worlds will appreciate and enjoy its perusal.

The Rat and its Relation to the Public Health. By Various Authors. Prepared by Direction of the Surgeon-General, Treasury Department, Public Health and Marine Hospital Service of the United States. Pp. 254. Washington: Government Printing Office. 1910.—This volume is opportune, and is by no means the least valuable of the many excellent publications issued by the department. The evidence which has been rapidly accumulating to prove that the rat and his parasites are responsible for the transmission of plague, and that plague itself is essentially a disease of the rat, calls for a complete survey of the life history of this genus, of the diseases peculiar to it, and of their position in regard to disease in man. All these points are dealt with in this volume by eighteen authors, each dealing with that aspect of the question of which he has made a special study. The result is a most interesting and authoritative presentment of an important subject in public health, and it is well to note that the practical aspects of prevention have not been overlooked. The difficulties of rat destruction, the comparative inefficacy of bacterial viruses in exterminating rats, the primary importance of effective "rat-proofing" of houses, and the shipping aspects of the rat question, receive consideration in turn. The volume is well worth careful study.

Editorial Notes.

The University of Bristol.

THE following communication has been received from a well-known graduate of one of the older Universities. We venture to think that it demands the serious consideration of the University authorities, and publish it in the hope that it may have a good influence in preventing the recurrence of such unseemly demonstrations as marred the last conferment of degrees.

"The first brood of graduates of Bristol University has now flown from the nest. The degrees were conferred in the large hall of the Victoria Rooms on the 20th of October, in the presence of a crowded audience, with a ceremonial which was devised, and deserved, to impress by its magnificence and solemnity. That it failed to do so can be gathered from the testimony of all who were present. And the reason should be frankly analysed for the sake of the fair name and well-being of the University, as well as for the comfort of those who may be attracted to similar ceremonies in future years. A good number on this occasion left with a bad headache.

"The rooms were packed to their fullest capacity with all that was representative of Bristol in its civic, social, commercial, and learned components. The galleries were as crowded as the floor. Distinguished visitors from all parts of England had come to show their benevolent interest in the youngest of English Universities. Beneath the organ and around it, on the rising benches, in the focus of all eyes, were massed the students, attracting attention not only by the noise they made, but by the devices, emblems, and inscribed banners they displayed and waved. Some were travestied in masks and carnival costumes. From the first they kept up a continual noise, which drowned the powerful organ, reduced the speeches to an inaudible pantomime, and prevented a spectator from communicating with his neighbour except by shouting in his ear.

Even when the official proceedings commenced this noise went on without stint or stay; from that moment there were two rival organisations in the field. The authorities triumphed in the sense that they carried their programme through. They worked, though in dumb show, with unflurried steadiness, and as a result the degrees were well and truly conferred.

"Benignant toleration was the attitude of the powers, and for a time that of the audience at large. Next day the local newspapers took a line of genial banter, and embroidered, in not unfriendly spirit, on the text that 'boys will be boys.'

"But it is a question whether the University itself—by which term we include students—would act wisely in letting things rest there. No doubt there is a good deal to be said for doing nothing: 'Young blood will have its course,' and 'Youth will be served.' The policy of 'quieta non movere' is a seductive one, and not likely to languish for want of supporters, so we make no apology for offering a few considerations on the other side.

"That little unfavourable comment has been heard, or rather seen in print, is no evidence that the misbehaviour was generally well liked or even condoned. The local newspapers, animated by feelings of local patriotism, kept their finger on the throttle valve. It is only under a serious sense of responsibility that we venture to speak somewhat bluntly about what we know. And we have no doubt, after inquiry, that large and important sections of the audience in the Victoria Rooms felt indignation and disgust. The Town Councillors were among these. It is not likely that civic dignitaries would care to assemble in the pageantry of their official robes, and in the presence of their wives and constituents, merely to play second fiddle in a pandemonium. The University, it should be remembered, depends on these dignitaries for a good part of its grants; if their respect and approval come to be forfeited the grants are likely to be cut down as well. We feel bound in this connection to emphasise the fact that the University is, to put it baldly, a bounty-fed institution. The students should hardly need to be reminded that they gain very considerable educational

advantages at a fraction of the prime cost, thanks to the generosity of certain broad-minded and wealthy citizens. Such of these as were present at the degree giving would be poorly impressed with the students' corporate gratitude and sense of fitness in nullifying completely a ceremony that was tended to be impressive and symbolic of a great and generous aspiration. When everyone else in the hall had come with the amiable desire to give the University a good send off—ladies in their prettiest dresses, officials in their robes, professors primed with speeches prepared with felicitous care for delivery in English—there was a jarring note of selfishness in the behaviour of those who stultified all these preparations by humouring their own instincts of organised disorder. The programme was, indeed, ' butchered to make a Roman holiday.'

" At the best and oldest Universities such practices, it is needless to say, would not be tolerated, and we must add, in fairness, they are not even attempted. ' Rags ' there are at both Cambridge and Oxford, but the participants have at least the saving grace to recognise what times and seasons are suitable and what are not. Bristol has special reasons for forming a good tradition, and for beginning it early. We admit that no hard and fast line can be drawn where the instinct of propriety is concerned, as human nature must be considered, and human nature is a good thing in the main. But when it comes to riotous disorder on the part of a couple of hundred persons, in the presence of a couple of thousand unwilling and powerless spectators, we are past all sane limits. Someone must draw the line, and the question is who ? If the students can draw it for themselves no more excellent way could be found. But if they fail we venture to suggest that the authorities should co-operate with them. It is unnecessary to give our own idea of the best way to set matters right, for that surely may be left to the good sense of those in authority. But no travesties, masks, confetti, missiles, banners, drums, trumpets, or other concrete paraphernalia of disorder should be allowed. Noise should cease during the actual proceedings. Of course, there is no objection to spontaneous wit or special recognition of

popular favourites—in fact, these give light and shade to the ceremony, like the play of summer lightning over the hills of a severe landscape. But all this should be auxiliary to the ceremony, and arise out of it. The complaint we have to make, in common with the public, is that there was no ceremony; it was smothered, drowned, and extinguished by a monotonous, senseless, and incessant din."

* * * * * *

State Sickness Insurance.

For a long time, we might say always, medical attendance on the working-classes and the poor has been unsatisfactory—unsatisfactory to the profession both from the medical and from the business point of view, whether in private or club practice, under the Poor Law, or in hospital; unsatisfactory to the public, though they have not as fully realised the position, and have been more or less content with inefficient medicine just as they were with bad sanitation, indifferent food and deficient education. But now they are waking up to the need of something better, and reports of various inquiries into the health and care of the people, especially the report of the Poor Law Commission, have revealed to the public conditions in the present system of medical attendance which are "inherently inimical to the cure and prevention of disease," and the State has determined to intervene. The Government has drawn up a scheme of insurance against sickness and invalidity, in which we take it for granted that some provision is made for the medical attendance of those insured. As the Government is going to undertake part, at any rate, of the risk of the insurance, it will be to its interest to provide the best attendance, in order that those insured may be treated in the most efficient manner, and so cured as quickly as possible. It stands to reason that any such scheme must affect most medical men, whether general practitioners, Poor Law officers, specialists, or members of a hospital staff, but especially those who practice among the working-classes and those who have undertaken contract practice. That the profession in Bristol and the neighbourhood fully appreciate

the importance of the question must have been evident to anyone who was present at the large meetings held to consider it in October.

There can be no doubt that medical men are utterly opposed to a continuance of the old system of contract practice, with all its abuses, lay control, insufficient remuneration, absence of wage limit, its practice of giving no free choice of doctor, and the feeling that under it medical men were ever at the beck and call of their patients without any means of protection from abuse of their services under the contract. The profession has now to make up its mind as to how it wishes the evils of this sort of practice to be remedied. Shall the State devise the remedy with the advice and the co-operation of the profession, or shall the profession devise the remedy, or the State alone do it, and the profession merely offer for purchase its services as medical attendant? In any case it is essential and in accordance with the past policy of the British Medical Association that the profession should act collectively and not individually, whether in advising or co-operating with the Government, in carrying out its own schemes or in bargaining with the State or the sale of its services; and in the event of the Government plans for any reason failing, we must be prepared to carry out ourselves some scheme for the betterment of the conditions of practice among the working-classes. Whatever course is adopted, it appears to be generally agreed that the patient shall have free choice of doctor, and that the remuneration shall be sufficient for the proper conduct of a medical man's practice. It is interesting here to note the remark made at one of the meetings referred to above: it was, "Medical fees are based not on the intrinsic value of the services rendered, but on the average amount which it is necessary to charge in order to produce an adequate income from the number of visits which a medical practitioner can conscientiously make." From this it appears that what is aimed at is not the fixing of a definite fee or scale of fees for each attendance, but of a sum of money which shall be properly proportioned to the amount of work done. Nevertheless, a great difference of opinion exists as to

the method of payment: whether the doctor shall be paid a certain fixed sum per annum for each person that he may be liable to attend, or whether he shall be paid a fee for each separate attendance as in private practice. The first system has been advocated largely because of its simplicity in working, and partly because, until lately at any rate, no practicable scheme had been produced for the working of the other system. It is argued that with a proper fee, with professional control, with a larger wage limit, and with free choice of doctor, the conditions of such a contract would be totally different to the conditions of old club practice, and would be advantageous to the profession. If a medical man were paid so much per head, he would be much in the position of a man with a regular salary, with this difference, that his salary would vary directly in proportion to the amount of work he might reasonably be considered liable to have to do, and he will have a fairly good idea of what his income will be each year. There is said to be great difficulty in estimating what a fair capitation fee should be, but some idea of it might be got by estimating the value of private practice in unopposed districts, where the population liable to attendance would be known, excluding of course Poor Law and contract practice patients. Say that with such a proportion of a thousand a man estimated his private practice at £500 per annum, then the fair fee would be 10s. per head. However, it appears that even such remuneration as this would not be acceptable to the supporters of the system of "payment for work done." Their contention is that the medical man should not take the risk of the insurance which he does under the other system, that the State is insuring the patient against sickness and should provide the necessary medical attendance, just as any insurance company provides for any loss that it may have insured against, that such a method of payment will be much more equitable and satisfactory, and that a medical man will know that he is being paid exactly in proportion to the amount of work that he does; that the method of paying for each attendance has been adopted by the British Medical Association in its scheme for school clinics, and that it has been

adopted abroad with success. Also that under such a system the man who succeeds in practice can be rewarded as he should be, not by more patients, but by better fees, and so more time in which to do his work, for he can always arrange with his patients to accept the payments made for them by the Government as part of his fees. In this scheme no wage limit would be necessary if the fee was, as it should be, an adequate one; but it appears to us that under any Government scheme the question of a wage limit would naturally be settled by the Government, who would take care to protect themselves from abuse.

We cannot get away from the practical difficulty. Will any Government undertake such an uncertain risk as the payment of the doctors' bills for fifteen millions of people? It is a risk that could only be undertaken by the State or some body with a large reserve fund. We cannot recall any department in which they do anything of the sort; and their salaried medical officers accept, and do not seem to object to much larger risks than the man paid fees per capita—the latter's pay does vary in direct proportion to the number he is liable to attend, the former's salary does not.

It is admitted that some means would have to be taken to prevent abuse by medical men, who consciously or unconsciously, if paid for each attendance, would be liable to give more attendance than they otherwise would. We do not think that any Government would give a free hand to every medical man and to every fanciful or fussy patient. The question of what these safeguards against over-attendance should be is a most difficult one, and is beset with two serious difficulties—one, that the safeguards may by their very nature interfere with the very essence of the Government scheme, which is the prevention of sickness by the provision of prompt, free, and unrestricted medical attendance; the other, that the methods of inspection and inquiry adopted might be quite intolerable to the medical profession.

If a medical man is careful in diagnosis and prompt and skilful in treatment, he will pay many less visits, and if he is

paid for each visit he will actually penalise himself, and it does not follow of necessity that he will be compensated by popularity and more patients.

It is very evident that there is great need for discussion and criticism by the profession, and we expect the criticism of a learned profession to be scientific and not polemical. It will be necessary in these discussions to remember that we have to find not only what is desirable, but what is practicable; that if we are blinded by our ideals, and if our demands are unreasonable, we may not only be left where we were, and from where we have long been trying to get away, but may be chained there by some objectionable Government scheme being thrust on us.

We must give whatever schemes are presented to us our most careful consideration, and do our utmost to perfect whichever we select, and it is essential that it should have the unanimous support of the profession; but to succeed it must not only be agreeable to the profession, but acceptable to the Government, and that will be most acceptable to the Government which is most convenient, and that will be most convenient which is backed up by the irresistible force of an enthusiastic and unanimous profession. Although we think that the system of payment per head is suffering unjustly from prejudice and from the sins of its ancestors, we have a feeling that the principle of payment for work done is the one most likely to obtain unanimity and enthusiasm, because it appears so much more attractive.

Notes on Preparations for the Sick.

Ceregen: a proteid-phosphate food powder.—JOHN BELL, HILLS & LUCAS Ltd., London, S.E.—Is tasteless, may be added to any food, or one to four teaspoonfuls may be dissolved in warm water; is best taken with meals, and is a food, not a medicine.

Ceregen should prove to be a valuable addition to the usual

articles of diet in cases where extra nitrogenous matter in a readily-digestible form is required.

Our examination confirms the statements of the makers as regards its composition and the total absence of starch.

Albulactin.—A. WULFING & Co., Chenies Street, W.C.—Albulactin is guaranteed by the makers to be a pure, soluble, milk-albumin. It is recommended as an adjunct to cow's milk, and formulæ are provided by means of which "humanised" milk may be readily prepared.

Numerous analyses have been made, and there is little doubt as to the identity of the substance with "Lact-albumin." Our own examination showed the substance to consist of soluble proteid. The clinical reports are also most satisfactory, and these bear more weight than chemical examinations.

"Lactitia."—NUTRICIA LTD., Loetermeen, Holland.—This is a preparation of condensed Dutch buttermilk with the addition of flour, and is supplied in hermetically sealed tins. We have made a chemical analysis, and find that it contains approximately 40 per cent. of total solids. The small amount of fat which is present rather detracts from its value as a food.

Biogène Diabetic Biscuits.—BONTHRON & Co., 106 Regent Street, London, W.—Biogène biscuits are one of a series of specialities made by this firm, their basis being a soluble casein with the addition of fatty and mineral matters.

They are not unpleasant to the taste, and chemical analysis failed to reveal the presence of starch—a significant fact, inasmuch as starch is frequently present in quantity in the so-called "starch-free" preparations for the diabetic.

Hordine : Liquid Malt.—OPPENHEIMER, SON & Co., London.—A food in itself, and it assists the digestion of ordinary starchy foods. One to four teaspoonfuls by itself, or with aerated water or milk, should be taken directly after meals.

It is a liquid preparation obtained from selected malted barley, and one which lacks the excessive sweetness of many of the semi-solid extracts.

The essential feature of a malt extract should be the presence in it of an active amylolytic ferment. We have examined Hordine from this point of view, and we find that it is capable of digesting starch at the ordinary body temperature. It can therefore be recommended to those who need a proteid containing food with digestive properties.

Thiocol. HOFFMANN, LA ROCHE & Co., London.—The potassium salt of guaiacol-sulphonic acid, containing 52 per cent. of guaiacol, is a fine powder, odourless, with a slightly bitter taste, readily soluble in water. It may be given in daily doses of two to four drachms, and it has none of the disadvantages of creosote and guaiacol.

Although drugs are not much in favour with the physicians who are carrying on sanatorium treatment, it is well to bear in mind that there is much evidence in favour of the utility of this drug, and that there are practically no drawbacks attending its use. It is conveniently put up in tablets of five grains each, but for larger doses the powder form must be more suitable.

"Perhydrol."—E. MERCK (16 Jewry Street, E.C.), Darmstadt.—This preparation is a one hundred volume solution of hydrogen peroxide (30 per cent. by weight), and is thus ten times stronger than the P.B. hydrogen peroxide. Concentrated hydrogen peroxide solutions are somewhat unstable, and this fact has hitherto stood in the way of their use, but by packing the solution in bottles lined with a layer of paraffin wax, and using a cork of the same material, this difficulty has been successfully overcome. Thus some weeks after the bottle had been opened the preparation was found to be still active. By adding to the Perhydrol nine volumes of water the ten-volume solution commonly used can be prepared. The undiluted preparation has a slight caustic action. Peroxide of hydrogen is now used so largely, both in general and special surgery as a hæmostatic, disinfectant and deodorant, that any description of its uses is needless. This preparation can be recommended as being acid free, constant and convenient.

By an ingenious arrangement in the cork the solution can be either dropped or poured out as required.

A New Antiseptic Dressing.—BURROUGHS, WELLCOME & Co., London.—**Tabloid Brand Bismuth Gauze** is a new dressing which will be particularly acceptable to the gynæcologist, and also in surgical cases generally. This preparation is non-toxic and has no smell. Its properties are equivalent in other respects to those of iodoform gauze. Placed as an absorbent dressing in the uterine cavity Bismuth Gauze has remained odourless for five days, whereas iodoform gauze under similar circumstances became foul in forty-eight hours.

Bismuth Gauze would appear, therefore, to be specially suitable for use in cases of incomplete abortion; in curretting, plastic operations on the cervix and vagina, and for many

other purposes where a powerful non-irritating antiseptic is required. It is made in widths of one, two and three inches, and is carefully sterilised and packed in one-yard rolls each surrounded by a specially varnished germ-proof cover.

Sinapisms : improved mustard plasters.—J. and J. COLMAN, London.—The valuable properties of pure mustard as a safe and rapidly-acting rubefacient are so well known as to render it unnecessary to insist upon them, and in the preparation of this improved plaster nothing but pure mustard is used.

The necessity to the household of having some reliable preparation of mustard as a counter-irritant always at hand, ready for immediate application is self-evident ; and Colman's Sinapism possesses many advantages.

1. It is quickly and easily applied, it being necessary simply to immerse the plaster in water for one second and it is ready for immediate application.
2. It is cleanly, the mustard not coming into direct contact with the skin, and consequently not adhering when the plaster is taken off.
3. It is very prompt and certain in its effect, commencing its action almost immediately it is applied.
4. It takes up more moisture, and consequently continues its action.
5. The mustard is spread on a thin pliable fabric, and therefore the Sinapism accommodates itself to the various parts of the body.
6. It is conveniently portable, either in a pocket-book, travelling case, etc.
7. It is free from any unpleasant smell.

Syrup Cocillana Compound. PARKE, DAVIS & Co., London. —Each fluid ounce contains :—

Heroin Hydrochloride	gr. $\frac{8}{24}$
Træ Euphorb. Piluliferæ	♏ 120
Syrup Wild Lettuce	♏ 120
Tinct. Cocillanæ	♏ 40
Syrup Squill. Comp. U.S.P.	♏ 24
Cascarin (P. D. & Co.)	gr. 8
Menthol	gr. $\frac{8}{100}$

This elaborate compound may be given in doses of one drachm or more in cases where the component drugs are indicated, but we think that the heroin is by far the most active of the components, and must give the more innocent ingredients a chance of getting credit from being in good company.

The Library of the Bristol Medico-Chirurgical Society.

The following donations have been received since the publication of the List in September.

November 30th, 1910.

Fleet-Surgeon W. E. Home (1) .. .. 1 volume.
L. M. Griffiths .. .. 2 framed pictures.

SEVENTY-EIGHTH LIST OF BOOKS.

The titles of books mentioned in previous lists are not repeated.

The figures in brackets refer to the figures after the names of the donors, and show by whom the volumes were presented. The books to which no such figures are attached have either been bought from the Library Fund, or received through the *Journal*.

Aarons, S. J. .. *Gynæcological Therapeutics* 1910
Allbutt and H. D. Rolleston, Sir C. [Eds.]. *A System of Medicine.* Vol. VIII 1910
Arderne, John .. *Treatises of Fistula in Ano, Hæmorrhoids, and Clysters* (Ed. by D'A. Power) ..[Reprint] 1910
Ashby, H. .. .. *Notes on Physiology* (Ed. by H. T. Ashby). 8th Ed. 1910
Bell, W. B. .. *The Principles of Gynæcology* 1910
Bidwell, L. A. .. *Intestinal Surgery* .. .. 2nd Ed. 1910
Brown, W. L. .. *Physiological Principles in Treatment.* 2nd Ed. 1910
Charpentier, A. E. L. *Hæmoglobinuria* 1910
Daniels, C. W. .. *Tropical Medicine and Hygiene* .. Pt. II 1910
Fein, J. .. .. *Hints in Rhinology and Laryngology* (Tran. by J. B. Horgan) 1910
Fortescue-Brickdale, J. M. *A Practical Guide to the Newer Remedies* 1910
Giles, A. E. .. *After-results of Abdominal Operations* 1910
Haas, P. .. .. *Organic Chemistry* 1910
Hart, D. B... .. *Phases of Evolution and Heredity* 1910
Hollander, B. .. *The Mental Symptoms of Brain Disease* 1910
Horder, T. J. .. *Clinical Pathology in Practice* 1910
Kidd, F. .. .. *Urinary Surgery* 1910
Lea, A. W. W. .. *Puerperal Infection* 1910
Lejars, F. .. .. *Urgent Surgery* (Tran. by W. S. Dickie) Vol. II 1910
Maddox, E. E. .. *Golden Rules of Refraction* .. .. .. 3rd Ed. [N.D.]
Marsh, H. .. .. *Diseases of the Joints and Spine* (Ed. by C. G. Watson) .. .. 3rd Ed. 1910
Moon, R. O. .. *The Relation of Medicine to Philosophy* .. (1) 1909
Morison, R... .. *An Introduction to Surgery* 1910
Morre, H. [Ed.] *Medical Guide to Watering Places and Sanatoria* 2nd Ed. 1910

Murray, R. W. .. *Hernia* .. .. 2nd Ed. 1910
Neuburger, M. .. *History of Medicine* (Tran. by E. Playfair) Vol. I 1910
Peckham, F. E. *The Classification and Treatment of Diseases commonly known as Rheumatism* 1910
Pringle, J. H. .. *Fractures and their Treatment* 1910
Pye [W.] .. .. *Elementary Bandaging and Surgical Dressing* (Ed. by W. H. Clayton-Greene and V. Z. Cope) .. .. 12th Ed. 1910
Rolleston, Sir C. Allbutt and H. D. [Eds.]. *A System of Medicine* Vol. VIII 1910
Schafer, E. A. .. *Essentials of Histology* .. .. .. 8th Ed. 1910
Sprigge, S. S. .. *Some Considerations of Medical Education* .. 1910
Sutherland, W. G. *Dispensing made Easy* (Revised by F. J. Warwick).. .. .. 4th Ed. 1910
Weiss, R. .. .. *Manual of Clinical Pathology* 1910
Whitelocke, R. H. A. *Sprains and Allied Injuries to Joints* 2nd Ed. 1910
Wootton, A. C. .. *Chronicles of Pharmacy* .. .. .. 2 Vols. 1910
Yonge, E. S. .. *Hay Fever and Paroxysmal Sneezing* 1910

TRANSACTIONS, REPORTS, JOURNALS, &c.

American Association of Obstetricians and Gynecologists, Transactions of the .. .. Vol. XXII 1910
American Journal of the Medical Sciences, The Vol. CXXXIX 1910
American Laryngological Association, Transactions of the 1910
Archives of the Middlesex Hospital .. .. Vol. XIX 1910
Boston Medical and Surgical Journal .. .. Vol. CLXII 1910
British Medical Journal, The .. .. Vol. I for 1910
College of Physicians of Philadelphia, Transactions of the Vol. XXXI 1909
Edinburgh Obstetrical Society, The Transactions of the Vol. XXXV 1910
Edinburgh Medical Journal .. .. N.S., Vol. IV 1910
Gazette des Hôpitaux 1909
Glasgow Medical Journal, The .. .. Vol. LXXIII 1910
Hospital, The .. .. Vol. XLVII 1910
Journal of Medical Research, The .. .. Vol. XXII 1910
Journal of Obstetrics and Gynæcology, The .. .. Vol. XVII 1910
Journal of the American Medical Association, The .. Vol. LIV 1910
Lancet, The .. .. Vol. I for 1910
Münchener medicinische Wochenschrift .. .. .. Bd. I für 1910
Practitioner, The .. .. Vol. LXXXIV 1910
Progressive Medicine .. .. Vol. III 1910
Revue hebdomadaire de Laryngologie .. .. Tom. XXX, Vol. I 1910
St. Petersburger medicinische Wochenschrift 1906, 1909
Surgery, Gynecology and Obstetrics .. .. Vol. X 1910
Wiener klinische Wochenschrift 1909
Zentralblatt für Chirurgie 1907
Zentralblatt für Gynäkologie 1907
Zentralblatt für innere Medicin 1907

MEETINGS OF SOCIETIES.

Bristol Medico-Chirurgical Society.

Annual Meeting, October 12th, 1910.

After a vote of thanks to the retiring President, Dr. James Swain, had been passed, Dr. B. M. H. Rogers took the chair and gave an introductory address (see p. 289). Later a cordial vote of thanks was given to Dr. Rogers for his able and interesting address.

The Honorary Secretary and Editorial Secretary, Dr. J. A. Nixon, read the following annual report :—

There is a balance in hand on the General Account of £126. From members' subscriptions the receipts were £164 17s. 0d. Balance from previous year £81 14s. 8d. Interest on deposit account £2 0s. 9d. The expenses amounted to £122 16s. 11d. It should be noted that the balance in hand is artificially inflated by the fact that the Library Grant has not yet been paid.

The balance in hand on the *Journal* Account at the end of 1909 was £2 5s. 2d.

During the year 1909–10 eighteen members joined the Society and eight resigned. We have to deplore the death of two ex-Presidents, Mr. Coe and Dr. Spencer. On October 1st, 1910, there were 171 members.

The Honorary Librarian, Mr. C. K. Rudge, read the following report :—

The Library of the Bristol Medico-Chirurgical Society now contains 11,390 volumes. During the year 292 volumes have been added. The Library is in regular receipt of 190 periodicals.

During the year 1,107 issues of books have been loaned to 105 borrowers. Our membership of Lewis's Library has proved of such service that our subscription has been doubled, and we now have the use of 14 volumes at a time. During the past twelve months 65 volumes were obtained from that Library.

The Bristol Medical Library, to which members of the Society have access, now consists of 21,630 volumes, and is in receipt of 249 periodicals. These are contributed by the constituent libraries in the following manner :—

BOOKS.

Bristol Medico-Chirurgical Society	11,390
Faculty of Medicine, University	8,477
Infirmary	1,189
General Hospital	574
Total	21,630

PERIODICALS.

Medico-Chirurgical Society	190
Faculty of Medicine	59
Total	249

The following are the officers of the Society for the Session 1910–11 : President—Bertram M. H. Rogers, B.A., M.D. Oxon. President-elect—C. A. Morton, F.R.C.S. Committee (*Ex-Officio*)—James Swain, M.D., M.S. Lond. (retiring President) ; R. Shingleton Smith, M.D. Lond. (Editor of *Journal*) ; C. K. Rudge, M.R.C.S. (Hon. Librarian) ; J. A. Nixon, B.A., M.B. Cantab. (Editorial Secretary). (*Elected*)—J. Taylor, M.R.C.S. (Ex-President) ; J. Michell Clarke, M.A., M.D. Cantab. (Ex-President) ; P. Watson Williams, M.D. Lond. ; G. Parker, M.D. Cantab. ; I. Walker Hall, M.D. Vict. ; F. Lace, F.R.C.S. ; J. Lacy Firth, M.D., M.S. Lond. ; John Wallace, M.B., C.M., B.Sc. Edin. Hon. Secretary—J. A. Nixon, B.A., M.B. Cantab.

RECEIPT AND EXPENDITURE ACCOUNT OF THE BRISTOL MEDICO-CHIRURGICAL SOCIETY, SESSION 1909-10.

1909.		£	s.	d.
Oct.	1.—Balance in hand	81	14	8
,,	1.—Members' Subscriptions ..	164	17	0
1910.				
Sept.	20.—Interest on Deposit Account	0	9	2
,,	20.—Interest on Deposit Account	1	11	7
,,	22.—Cheque not presented ..	0	5	0
Oct.	1.—Petty Cash ..	0	18	9
		£249	16	2

1909.		£	s.	d.
Oct.	14.—Bank Postages	0	0	9
Nov.	5.—Honorarium and Stamps	6	5	0
1910.				
Jan.	11.—Bromhead ..	1	1	0
,,	11.—Stamps.. ..	1	0	0
,,	11.—Lantern ..	1	1	0
Apr.	1.—Stamps.. ..	1	0	0
,,	19.—Lantern ..	1	1	0
July	6.—Editorial Sec.	47	15	0
Aug.	16.—Porter	1	5	11
Sept.	10.—Rent, etc. ..	57	6	0
,,	20.—Printing ..	2	14	6
,,	22.—Typewriting	0	5	0
,,	27.—Repairs ..	1	3	0
	Hon. Sec.'s Petty Cash	0	18	9
	Balance in Bank	126	19	3
		£249	16	2

November 9th, 1910.

Dr. BERTRAM M. H. ROGERS, President, in the Chair.

Dr. J. O. SYMES read notes of a case of **Myasthenia with Enlargement of the Thymus.** The patient was a woman of 21 who had been taken ill, ten days before admission to hospital, with pain in the head and neck, followed in two or three days by weakness of the legs. Also difficulty in swallowing was then

noticed. Later there had been tingling in the hands with pain and loss of power in both arms, a rapid pulse, and occasional attacks of heart failure. On admission to hospital the patient was much exhausted. She was hysterical in manner, there was marked weakness of the limbs, and the patient could not stand. Ptosis of both eyelids was present. Mastication and swallowing were difficult. No wasting. Thirty hours after admission the patient became restless and dyspnœic, and died suddenly three-quarters of an hour later. A *post-mortem* had been made by Dr. Emrys-Roberts. Both lobes of the thymus were much enlarged, also the thyroid was somewhat enlarged. The duodenum showed a number of dilated capillaries, and the ileum showed the same and also several hemorrhagic areas. The liver and pancreas showed similar hemorrhages. The speaker considered the diagnosis, and gave reasons for considering the case to be one of **myasthenia gravis.** A difficulty was the rapidity of the progress of the disease. Campbell and Bramwell had found the average duration of myasthenia in sixty cases to be one and a half years, but one case had ended fatally in fourteen days and another in a month. The pathological changes found at the *post-mortem* supported the diagnosis. Buzzard's statement was quoted that the symptoms of the disease " are best explained by assuming the presence of some toxic agent which has a special influence on the protoplasmic (as opposed to the fibrillar) constituent of voluntary muscle."

Dr. W. H. C. NEWNHAM read a paper on **225 Consecutive Laparotomies with Nine Deaths.** The cases were grouped into twelve classes, and the causes of death in the fatal cases considered. Also some accidents and complications which have been met with were described, including one case in which an end to end suture of torn bowel had been successfully accomplished.

Dr. E. C. WILLIAMS read a paper on **The Treatment of six cases of Posterior Basic Meningitis.** During the past two and a half years six cases of the disease had been under his care, three cases were under twelve months, and three were between one and two years of age. Three children were males, three females. All the cases occurred during the first nine months of the year. Lumbar puncture was performed in each. In two cases, both of which recovered, lumbar puncture alone was performed, one child, however, was an idiot. Of the four cases treated with lumbar puncture and Ruppil's serum, three recovered, one died. Lumbar puncture is useful both from a diagnostic and therapeutic standpoint. In three cases the fluid was cloudy, and in two cases diplococci were present; in one case undoubtedly the diplococcus cellularis was present, in the other a diplococcus which was gram-positive. A gram-positive diplococcus

has been found in other cases of this disease. Lumbar puncture is only one element in the diagnosis, and its findings must be taken in conjunction with established clinical signs. The child's weight is the surest and earliest guide as to the efficacy of treatment. Dose of serum for an injection varies from 1½ to 5 cc. As to the number of injections one must be guided by the progress of the case. Whether it is possible to differentiate between the diplococcus found in this disease and the diplococcus of cerebro-spinal meningitis is a question which has not yet been finally decided. Serum treatment certainly seems to afford the best chances for a complete recovery in this disease. Dr. EDGEWORTH remarked upon the value of the suggestion, an original one he believed, that the increase or decrease in weight gave a very important clue to prognosis in cases of this disease.

Mr. C. A. MORTON showed a specimen of **Twin Gestation in one Fallopian Tube.**

J. LACY FRITH.
J. A. NIXON, *Hon. Sec.*

Obituary Notice.

TREGENNA BIDDULPH GOSS, M.R.C.S., L.S.A.

IT is with very great regret that we have to record the death of Mr. T. B. Goss at the age of 73, which occurred at Bath on November 20th, where he had been in practice for forty-two years. Mr. Goss was known to many members of the profession in consequence of the great regularity with which he attended medical meetings, both in Bath and Bristol, and to know him was to like him. His popularity with all in Bath was very great, and he was never known to have a dispute with any member of the profession. His kindly and genial disposition and his deference to the opinion of others, whilst maintaining his own views, enabled him to live a prosperous professional life in perfect friendship with all his brethren. He was elected President of the Bath and Bristol Branch of the British Medical Association in 1892.

His sympathy with his patients, and his kindness to those of them who had no means of repaying him, are gratefully remembered by many who now mourn the loss of a doctor who never spared his time when his help was called for, and a warm personal friend who could always be relied upon when his advice was needed.

Local Medical Notes.

UNIVERSITY OF BRISTOL.

Congregation.—The first congregation for conferring degrees of the University was held at the Victoria Rooms on October 20th, when the Vice-Chancellor was supported by the Deans of the Faculties, the Lord Mayor and Sheriff, and the Master of the Merchant Venturers.

Convocation.—At the first Convocation held on October 27th the Rev. de Lacy O'Leary, M.A., B.D., was elected Chairman, and Dr. Nixon as the representative on the Council.

Court.—At the meeting of the Court Dr. T. H. Warren was added to the members of the Council.

New Physiological and Chemical Laboratories.—The new Physiological and Chemical Laboratories at the University were officially declared open on November 15th. The ceremony began in the Great Hall with prayers, offered by the Bishop of Bristol, and the singing of two hymns. Addresses were then given by the Pro-Chancellor, Lord Winterstoke, and Dr. Herbert Warren, President of Magdalen College, Oxford (now a member of the University Council). A procession was then formed, headed by the Chairman of the Council, Mr. Lewis Fry, with the Lord Mayor, city officials, and members of the University in stately array. These passed round through the quadrangle by the road to the entrance of the new buildings, where a guard of honour of the University contingent of the Officers' Training Corps, under Major Swayne, was drawn up. Mr. Lewis Fry gave three knocks on the door with an ivory mallet, whereupon Lord Winterstoke from within the building unlocked the door, and announced the new wing open. On the same evening, in spite of bad weather, a most successful and well-attended reception was given in the new buildings. Many scientific demonstrations were prepared which were calculated to give the visitors some idea of the up-to-date equipment of the new laboratories. The University is to be congratulated on possessing two departments which represent the latest developments for teaching and research in physiology and chemistry. Space prevents our giving full details of all that the new laboratories contain. Their resources have been minutely described in the *British Medical Journal* of November 26th.

Professors Kent and Francis deserve the highest praise for the energy they have devoted to ascertain what equipment the best laboratories in England and abroad have found necessary, and for their sound judgment in installing the same. The buildings reflect the greatest credit also on the General Purposes Committee of the University, on the architect (Mr. Oatley), and on the builders (Messrs. Cowlin and Son), each and all of whom have contributed to adding to the University a new wing which encourages us to believe that the requirements of sound learning are understood and appreciated by everyone who has had a hand in the matter. Where money can be wisely expended it should be ungrudgingly bestowed. There still remain other departments in the University of Bristol to whose improvement men of wealth might contribute with every confidence that their money will not be wasted, but judiciously applied to the better advancement of knowledge.

Association of Alumni.—The first dinner of this Association was held on October 21st, under the presidency of Mr. Munro Smith. Sir Oliver Lodge was the guest of the evening, and in his speech pointed out the similarity in the origins of Birmingham and Bristol Universities.

University Settlement.—A meeting to promote the establishment of a University Settlement was held in the afternoon of October 21st, 1910. Sir Oliver Lodge was one of the chief speakers. The object of the institution is to promote the general welfare in its neighbourhood and to provide a centre for social study and training.

EXAMINATION SUCCESSES.

CONJOINT BOARD.—*Chemistry and Physics:* G. S. Terry. *Practical Pharmacy:* C. J. D. May, A. G. Fisher, C. N. Vaisey. *Medicine:* S. Marle, E. Christofferson. *Surgery:* C. Hart. *Midwifery:* G. H. Griffiths, R. F. Bolt, L. C. Watkins-Baker.

M.R.C.S., L.R.C.P.—Henry B. Parker.

L.D.S. ENG.—*Mechanical Dentistry:* P. L. Ealand.

APPOINTMENTS.

Bristol Royal Infirmary.—H. Chitty, M.B., M.S. Lond., F.R.C.S., has been re-appointed Senior Resident Medical Officer and House Surgeon; R. C. Clarke, M.R.C.S., L.R.C.P., Casualty Officer.

Bristol General Hospital.—The following appointments have been made:—T. E. Malherbe, M.B., Ch.B. Edin., House Physician; A. W. Burton, M.B., Ch.B. Edin., House Surgeon;

P. J. Veale, M.B., B.S. Lond., Casualty House Surgeon; C. B. Tudehope, M.B., Ch.B. Edin., Assistant House Physician; Scott Williamson, L.R.C.P. & S. Edinb., Pathologist.

Bristol Eye Hospital.—To be Surgeons: C. H. Walker, F.R.C.S. Eng., M.B. Camb.; A. N. Godby Gibbs, M.R.C.S.; A. Ogilvy, M.D., F.R.C.S.I.

Cossham Hospital.—D. Robertson, M.B., Ch.B. Edinb., House Surgeon.

Eye Dispensary.—The following appointments have recently been made:—E. H. E. Stack, F.R.C.S., Surgeon, *vice* Dr. Ogilvy, resigned; A. Fells, M.B., C.M. Edin., W. P. Taylor, L.S.A., L.M.S.S.A., and H. B. Porteous, M.B., Ch.B. Edin., Assistant Surgeons.

Brighton Royal Alexandra Hospital for Sick Children.—W. Barrington Prowse, M.R.C.S., L.R.C.P., has been appointed Honorary Radiologist.

Royal London Hospital for Diseases of the Chest.—Latimer J. Short, M.D., B.S. Lond., Clinical Assistant.

West Riding Asylum, Wakefield.—Henry Devine, M.D., B.S. Lond., Deputy Superintendent.

Philosophies.—Dr. James Pearse, of Trowbridge, sends us the following note on "Philosophies," by Professor Ronald Ross:—

Few practitioners have time to indulge to any extent in the pleasures of literature; but all should seize an opportunity to peruse this small volume of verse by one of the leaders of the profession.

Here is a series of poems which reveal a sensitive mind stabbed by the poignancy of suffering multitudes, by the relentlessness of Nature in some of her moods, and earnestly seeking to read the riddle which such experiences provoke.

Briefly, the philosophy inculcates the pursuit of Science as the one certain means of lessening human travail, the necessity of thrusting aside all that does not pass the test of reason, of quitting dogma and speculation for solid fact.

> "Thee most we honour, thee,
> Great Science. Hold thy way:
> The end thou canst not see,
> But in the end the day.

We think it false to dream
Beyond the likely fact ;
We grant thee, Truth supreme,
Whatever thou exact."

One may not agree that such philosophy is the last word ; one may argue that man's nature comprises more than reason, that faith is more than fancy, that the conquest of Nescience will not alone rid the world of tribulation ; but one cannot but admire the whole-hearted persistence with which the author works out his creed—a creed which in his case has produced so beneficent an issue.

The work of the medical profession brings them day by day in contact with suffering ; the very repetition of it tends to dull the sense of sympathy. The wounds of the lame brother are bound, but the tragedy of his sufferings is not always appreciated. It is well to try to keep the lamp of sympathy burning while using all the powers of scientific application. Such combination of sympathy and practical effort the " Philosophies " pourtray with no light touch. The poverty-stricken multitudes of the east, decimated by famine and pestilence, stretch out appealing hands for help. It is this sense of tragedy which appears to have stirred Professor Ronald Ross to bend his mind unceasingly towards its alleviation. He shows us the tragedy of the Indian mother nursing a three-year child at her withered breast, of the corpse tossed on the Ganges flood, of malaria's " heated hands and fevered eyes."

" The painful faces ask, Can we not cure ?
We answer, No, not yet ; we seek the laws.
O God, reveal through all this thing obscure
The unseen, small, but million-murdering cause."

. . . . .

" Half stun'd, I look around
And see a land of death—
Dead bones that walk the ground,
And dead bones underneath.

A race of wretches caught
Between the palms of Need,
And rub'd to utter naught,
The chaff of human seed.

. . . . .

And this one, fever'd, flags,
And that one, hopeless, tries,
Or, uncomplaining drags
A giant leg, and dies."

The poems *In Exile* deal largely with experiences of desert life—the pitiless sun " a pestilence of light," the dust, the cry

for rain, horrors of the night-time, the longing for the homeland. They contain many passages of striking power and vividness.

Such is the setting of Professor Ronald Ross's famous work—a life of eager, patient pursuit of Science in the midst of much personal travail, lived by a man consumed with the thought of the agonies of those amongst whom he moved, and the pitifulness of their lot. Of the consummation of his work he speaks thus :—

"This day relenting God
Hath placed within my hand
A wondrous thing: and God
Be praised. At His command

Seeking His secret deeds,
With tears and toiling breath,
I find thy cunning seeds,
O million-murdering death.

I know this little thing
A myriad men will save.
O Death, where is thy sting?
Thy victory, O Grave?"

It has been said that wherein modern life mainly surpasses that of the ancients is in the extension of sympathy and in the mass of attainable knowledge. It is to the credit of Professor Ronald Ross that he exemplifies the sympathy and has very materially added to the knowledge. He may be considered to have won the crown of Wordsworth's "happy warrior"—

"Who, doomed to go in company with pain
And grief and bloodshed, miserable train,
Turns his necessity to glorious gain."

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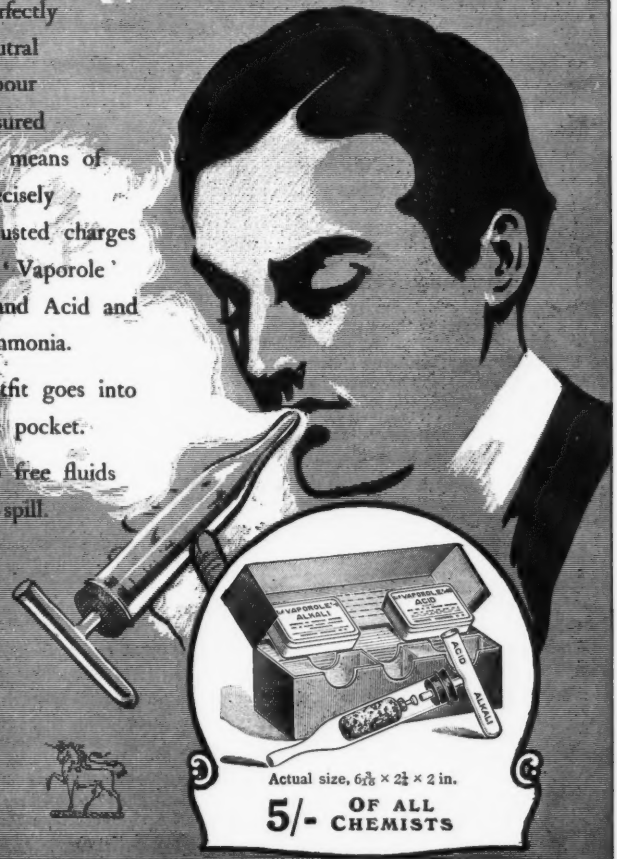

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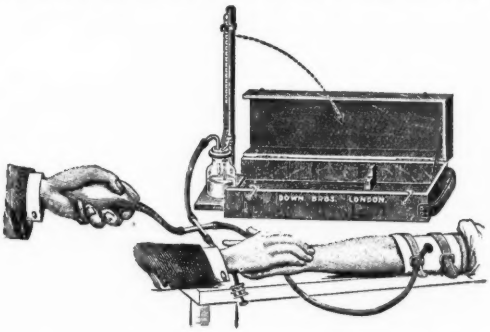

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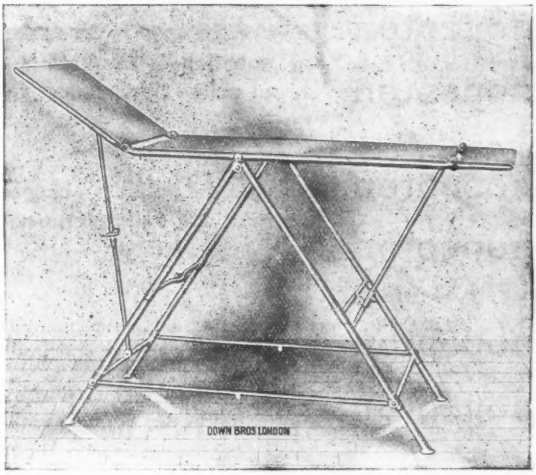

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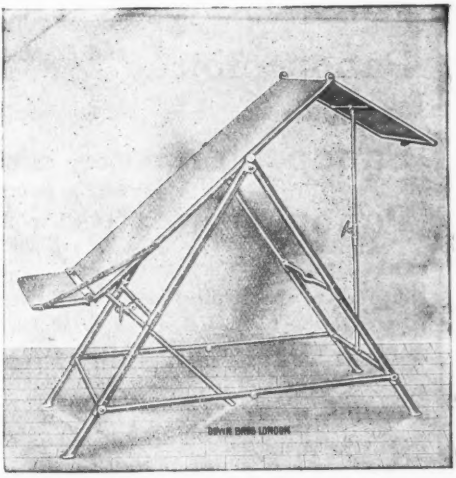

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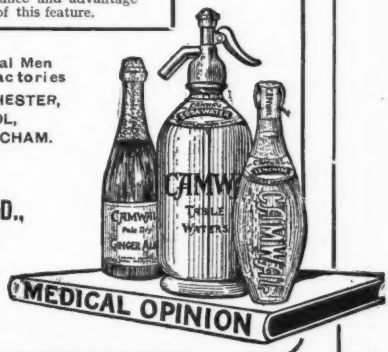

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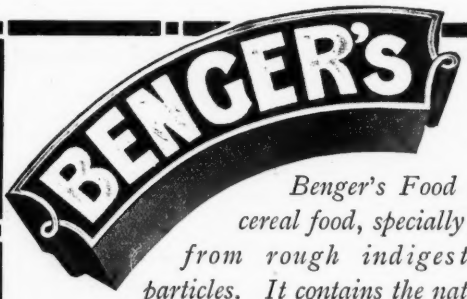

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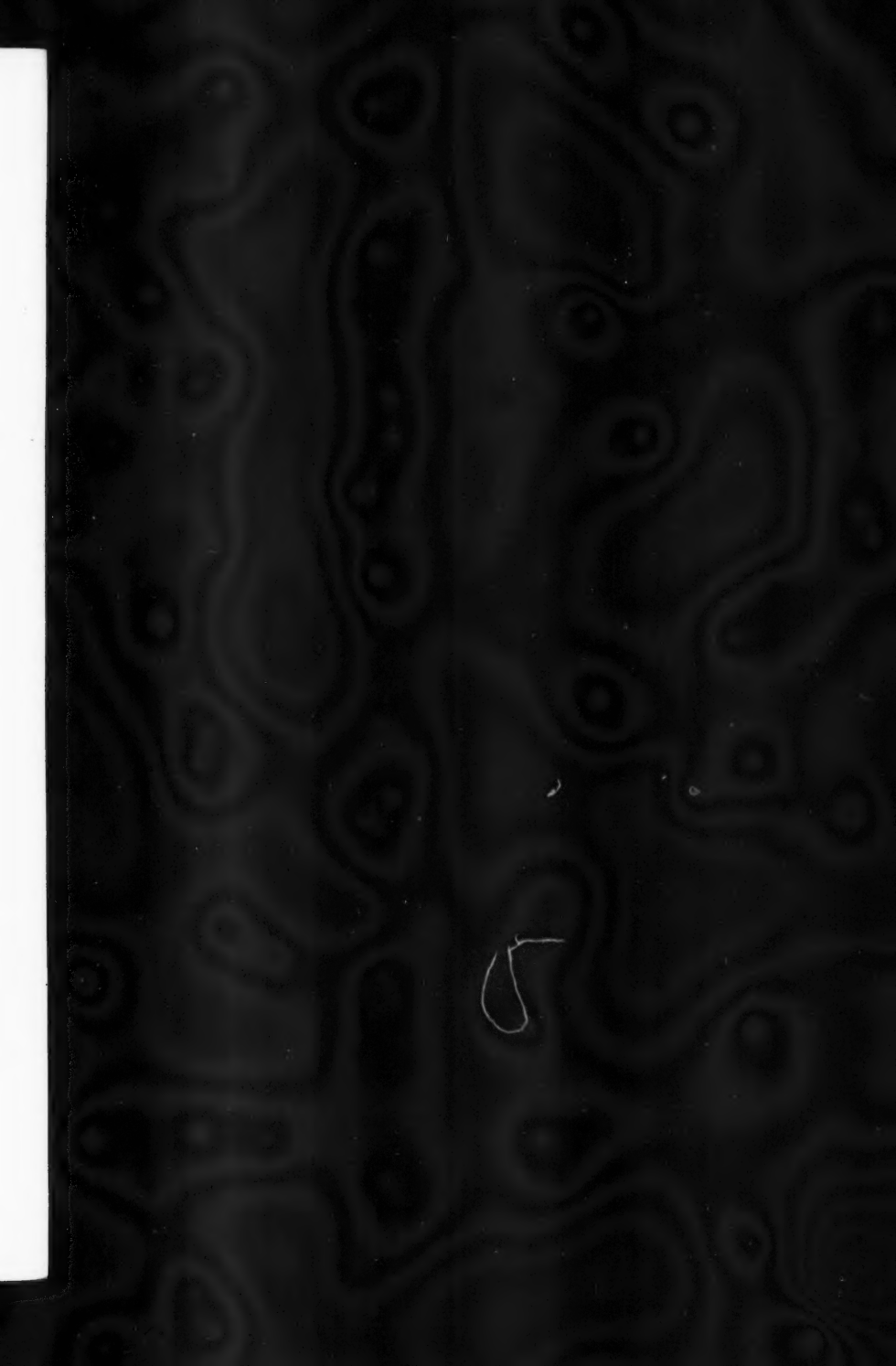

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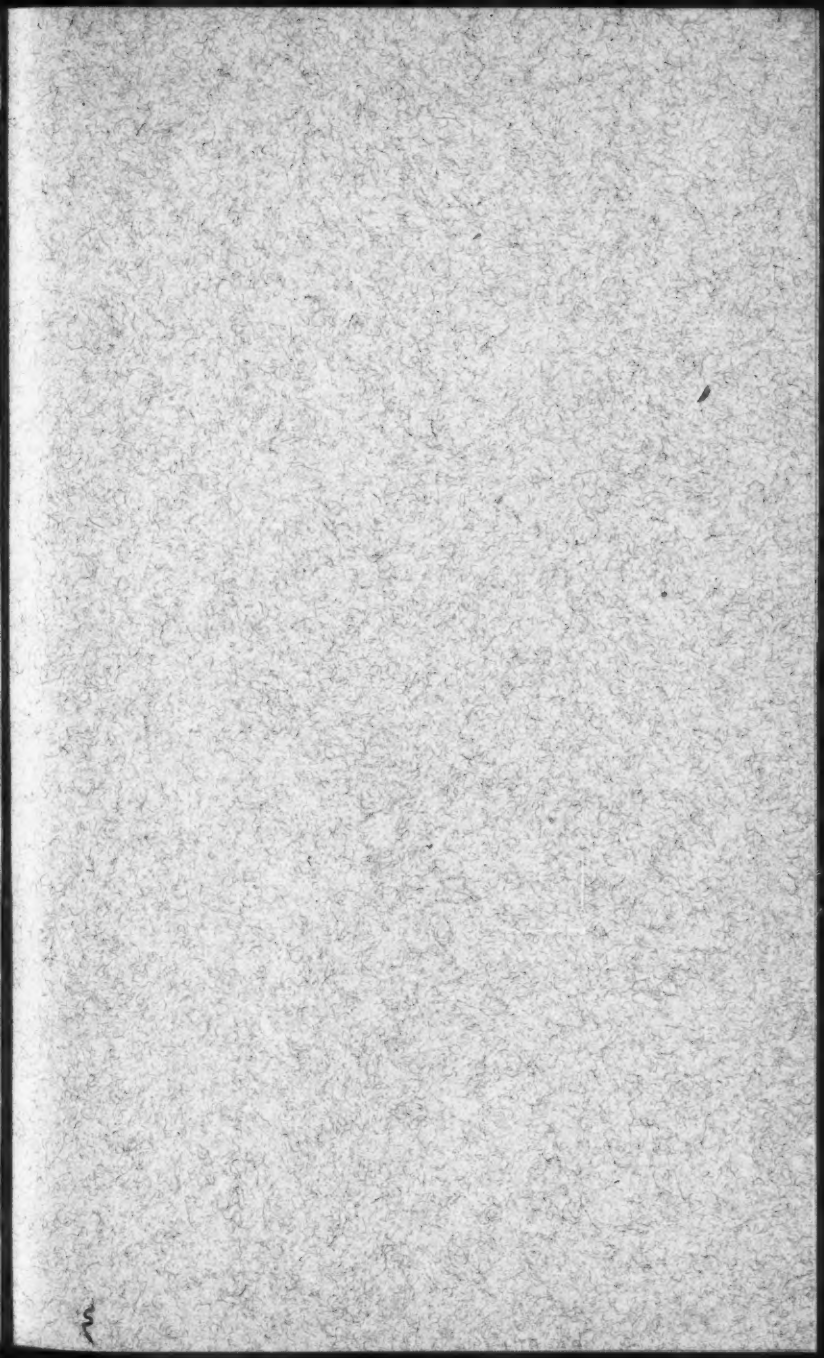
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